NG Environmental Contractors, LLC
Asbestos • Lead Paint Removal • Select Demolition

July 20th, 2012

James Lambrianidis
Lambrian Construction Corp
384 Washington Street
Westwood, MA 02090

RE: Revised submittal information for the
John E. Burke School Window Replacement
127 Birch Street, Peabody, MA

Dear Mr. Lambrianidis,

NG Environmental Contractors LLC would like to submit the following additional information needed to be added to the submittal information that we have already submitted for the John E. Burke School project. Please note, that the information was place according to the manner ATC Associates INC. laid out in their letter dated July 16th, 2012. Please refer to this letter to assist you in re-submitting the submittals to the proper personal that will review all the information needed.

Response to:

1.06.A.1 1. NG Environmental Contractors has already submitted our signed certification

1.06.A.3 1.a NG Environmental Contractors is well aware that the PCB material be removed may or can have ACM present. We plan on building a full containment, decontamination unit, and negative air pressure to remove both PCB's and ACM's. Please see asbestos abatement work plan for further details

1.b NG Environmental Contractors will have our employees wear PAPR respirators with tight fitting face pieces. If, personal air samples results are found to be lower than P.E.L, we will have our employees switch to a half face respirators with P100 filter cartridges.

1.c NG Environmental Contractors will conduct personal air monitoring by placing one personal pump on one out of six workers inside containment. Employees wearing the personal air pump/cartridge will wear them for the duration of time inside containment, up to eight (8) hours. The sample will be sent to Galson laboratories to be analyzed with NIOSH Method #5503.

1.06.A.6 1. As discussed and agreed upon at the meeting held on 7-18-2012, there will be no power washing, unless the paint manufacturer requires power washing for preparation of surfaces,

2. Waste Management has stated that Model City, NY will be the landfill that they will be transporting and disposing the PCB remediated waste.

3. As discussed and agreed upon at the meeting held on 7-18-2012, NG Environmental Contractors will clean all tools being used to remove PCB waste with Hexane. Any tools that can't be decontaminated will be disposed of as remediated PCB waste.

SITE SPECIFIC HEALTH AND SAFETY PLAN

JOHN E BURKE SCHOOL, 127 BURCH STREET, PEABODY, MA.

GENERAL CONTRACTOR:
LAMBRIAN CONSTRUCTION

GENRAL CONTRACTOR CONTACT:
JIM LAMBRIAN 781-481-1100

PROJECT MANAGER:
NOLBERTO GALICIA 978-831-3232

SITE HEALTH AND SAFETY OFFICER:
MIGUEL T BAEZ. 978-265-9097

CONTAMINANTS AT THE SITE:
ASBESTOS AND PCB'S

EMERGENCY CONTACT INFORMATION:
IN THE EVENT OF A MAJOR ON-SITE MEDICAL EMERGENCY THE SITE HEALTH AND SAFETY OFFICER SHAL CALL 911 FOR EMERGENCY MEDICAL SERVICES.

NEAREST MEDICAL TREATMENT CENTER:
KINDRED HOSPITAL-BOSTON NORTH,
15 KING STREET, PEABODY, MA 01960.
(A STREET MAP TO THE HOSPITAL IS ATTACHED)

LOCAL EMERGENCY CONTACTS:
FIRE DEPARTMENT: 978-531-3444
HEALTH DEPARTMENT: 978-538-5926

STATE EMERGENCY CONTACTS:
DEPARTMENT OF ENVIRONMENTAL PROTECTION: 617-292-5500
OSHA: 978-837-4460

FEDERAL EMERGENCY CONTACTS:
ENVIRONMENTAL PROTECTION AGENCY 1-888-372-5371

SITE SAFETY SIGNATURE SHEET

The following site personnel have read the Health and safety procedures attached and are familiar with its provisions:

NAME:	SIGNATURE:	DATE:
Site Safety Officer		

Plan Prepared by: **Robert Veilleux**
Project Manager

Plan Reviewed by: **Nolberto Galicia**
President

Plan Reviewed by: **Miguel T Baez**
Site safety officer

SITE SPECIFIC HEALTH AND SAFETY PLAN

NG ENVIRONMENTAL CONTRACTORS, LLC has adopted the following Health & Safety Plan for working with PCB'S, which will be encountered during removal of windows at John E. Burke School.

The purpose of this plan is to provide health and safety precautions for the initial and subsequent site visits until the contaminant has been mitigated.

JOB SITE SAFETY CHECKLISTS:

The following will serve as a guide for the development of job site and equipment inspection checklists. The sample checklist includes many items to be inspected which are common to most job sites.

1. Job Site Safety Information
    a. Posting of Asbestos and PCB warning posters/signs
    b. Schedule of on-site weekly safety meetings
    c. Check all medical and first-aid services and equipment
    d. Make sure all emergency telephone numbers, Fire Department, Police, and Ambulance, are posted

2. Housekeeping and Sanitation
    a. General neatness of working areas
    b. Regular disposal of waste and trash
    c. Passageways and walkways clear
    d. Adequate lighting
    e. Waste containers provided and used
    f. Sanitary facilities adequate and clean
    g. Drinking water adequate
    h. Disposable drinking cups

3. Fire Prevention
    a. Fire instructions to all personnel
    b. Fire extinguishers identified and checked
    c. Phone numbers of fire departments available
    d. No smoking signs posted and enforced as applicable

4. Electrical Checklist
    a. Check all electrical cords for proper grounding and conditions
    b. Check all power tools to insure grounds and conditions
    c. Check all power sources for proper grounding

5. Hand Tools
    a. Proper tools being used for each job
    b. Inspection and maintenance
    c. Damaged tools repaired or replaced promptly
    d. Clean tools with proper chemicals or methods

6. Power Tools
    a. Proper training in the use of power tools
    b. Tools and cords in good condition
    c. Proper grounding
    d. All safety guards are in place and in working condition

7. Ladders
    a. Ladders inspected and in good condition
    b. Proper length ladders in use
    c. Properly secured to prevent slipping
    d. Rails should extend 36" above top ladder rest areas
    e. Rungs or cleats not over 12" on center
    f. Step ladders fully extended when in use
    g. Metal ladders not used around electrical lines
    h. Proper maintenance and storage

3. Scaffolding
    a. Is erection properly supervised
    b. Will all structural members meet safety standards
    c. Are all connections secure
    d. Is scaffolding secured to structure
    e. Are work areas free of debris
    f. Are workers protected from falling objects
    g. Have fall protection devices been provided
    h. Are fall protection devices in good condition

9. Handling and Storage of Flammable Materials
    a. All containers are labeled properly
    b. All materials are in approved containers
    c. Fire hazards are checked
    d. Proper storage temperatures and protections
    e. Proper types and number of fire extinguishers available

10. Personal Protective Equipment
    a. Eye protection
    b. Face shields
    c. Half face respirators with combo filters (asbestos & chemical)
    d. Hard hats
    e. Tyvec suits for asbestos and PCBS removal
    f. Rubber gloves and boots

EMERGENCY RESPONSE PLAN

PROCEDURES:

1. Fire emergencies will be announced by an aerosol boat horn. The boat horn (one required in each decon) will be kept on the work site at all times.
2. All possible entrances to the work area will have appropriate warning signs posted. All signs will be checked and maintained on a daily basis.
3. A simple map of the work site will be posted at each work area with clearly marked exist and egress to exist the building. After an evacuation **NG Environmental Contractors, LLC/ or subcontractor** representative will use the site sign-in log to make sure all employees have evacuated the building. All employees will be made aware of the maps and there locations prior to work each day.
4. Fire escapes (if any) locations will be marked and employees will be instructed on how to use them in case of an emergency.
5. Fire extinguishers will be placed in the work areas and all employees will be instructed on how to use them as well as their location whiting the work area.
6. It will be the responsibility of **NG Environmental Contractors, LLC super and/or General contractor** representative to account for each employee on a daily basis.

DRIVING ROUTE:

1. Attached are driving directions and a map to the nearest hospital.

EMERGENCY PHONE NUMBERS:

1. Attached are the emergency phone numbers and **NG Environmental Contractors, LLC** contacts.

LOSS OF POWER/NEGATIVE PRESSURE/VENTILATION:

1. During the abatement of various materials and work spaces air-handling equipment will be utilized. For PCBS abatement negative pressures is created, however in a confined space a blower may be installed. In either situation, the loss of power will result in a shutdown of the air handling equipment. Work areas in occupied buildings will have a backup power system or a generator on site, large enough to maintain negative pressure.

   When the loss of negative pressure or a containment breech occurs, all work will cease. The entire containment will be misted and containment will be evacuated.

All deacon and material transfer station will be closed and sealed. The intake of the HEPA filters should be sealed to prevent a release due to black flow of air from the building exterior. Misting will occur often enough to suppress any dust.

2. The site supervisor will notify the air-monitoring professional responsible for the site, and air samples should be continuously taken just outside of the work area, especially at occupied spaces. Bordering occupied spaces should be evacuated as precaution and entry pints sealed. HAVC system operating in adjacent spaces should be shut down.
   Once the air samples are analyzed if they are acceptable, no further action is needed.
   However if the samples show a raise above the level of the backgrounds samples, the space will be placed under negative pressure and cleaned once power is restored. Air sampling will continue until acceptable levels area met.
   For confined space, the employees will vacate the space until airflow is restored.

INJURY REQUIRING EMERGENCY MEDICAL ATTENTION:

1. In the event of an injury that requires medical attention, decontamination of the worker will not stop evacuation. When possible, injured persons should be removed from the workspace, especially in the event for heat related injury person at risk.
2. Should a situation a rise requiring emergency medical attention, the supervisor will be notified and the proper authorities called. If it is possible to do so without further injury to the worker, the person injured should be HEPA vacuumed and washed while the authorities are in route.
3. When the authorities arrive they will be apprised of the situation and supplied any PPE deemed necessary. If it is required, the containment may be breached to allow entry and exit of stretchers and medical professional and equipment. This breach shall occur at the moment of entry or exit and be resealed immediately after entry or exit.

SUMMARY:

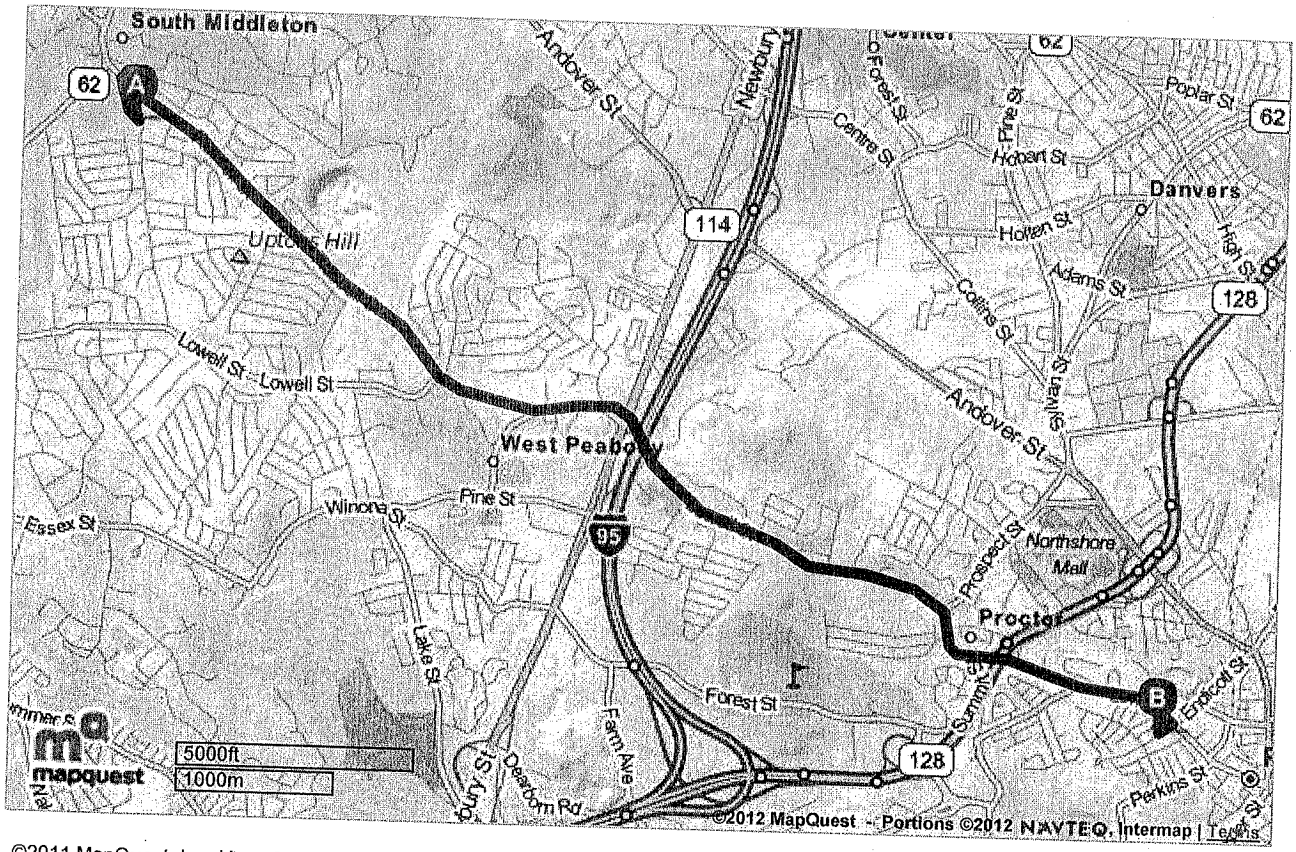
It is our hope that this procedure need never be utilized. However, in the event they become necessary, the priorities are clear. Report the problem. Sound the alarm. Prepare for the arrival of emergency personnel. Take appropriate action.

WORK PLAN AND PROCEDURES;

1. All PCB abatement work shall be performed in accordance with OSHA regulations, Hazardous Waste Operations and Emergency Response (HAZWOPER) or other approved equal standard, and any other applicable federal, state, or local regulations. All workers handling Workers on-site will have completed a 40-hour HAZWOPER trained or other approved training.
2. Worker Right to Know and Health and Safety Standards of 29 CFR 1926 shall apply to this project. Workers shall be informed of the PCB building components to be removed and MSDS will be provided for chemicals, cleaning agents, and any other materials used.
3. Workers will be made aware that materials to be removed also contain asbestos and they are require to manage these contaminants is specified in SECTION 020800 of the project specs.
4. When there is a conflict between the asbestos, demolition, or PCB specs, the most stringent requirements shall apply.
5. We will provide all our personnel with PPE, protective clothing, and monitoring equipment consistent with the levels of protection required for each type of work.
6. All workers will handle all chemicals (Hexane, Sika-Guard, DECON Solution 1, and other chemicals per the manufacturer's recommendations.
7. Our workers will be provided and wear at a minimum, half-face respirators with P100 filters, water resistant Tyvek-type suits with boot covers, rubber gloves, rubber boots and eye protection when removing PCB Bulk Product Waste and PCB Remediation Waste.
8. All workers wearing respirators will have Respiratory Protection training accordance with 29 Cf R 1910.134, fit test completed, and medical paperwork.
9. No chipping hammers, grinders or wire wheels will be used to remove PCB Bulk Product Waste or PCB Remediation Waste materials unless performed inside containment with HEPA attachments.

10. All equipment and tools will be provided to the Site free of contamination. All tools and equipment will be cleaned with a HEPA vacuum and cleaning solution before leaving containment.
11. The work area will be surrounded with caution tape and signage at a distance to keep unauthorized personal and visitors out of the work area, A tool drop zone and personal decontamination facility will be established contiguous to the work zone. A clean zone will be established along with waste stream pathways.
12. When working on the interior or exterior of the Site building, containments and/or regulated areas will be required to be established for removal and cleanup of the sealants and associated materials.
13. We will provide all drums, storage containers, dumpsters, and materials required to collect, store, and transport all PCB-containing waste in compliance with Mass DEP, EPA, and U.S. Department of Transportation (DOT) requirements. All drums we supply will meet the requirements of DOT 49 CFR 173.
14. We will stop all operations concerning exterior PCB-containing material removal if contaminants are capable of being airborne due to high winds or heavy precipitation.

Total Travel Estimate: **6.02 miles - about 15 minutes**



mapquest

Trip to:
Kindred Hospital-Boston North
15 King St
Peabody, MA 01960
(978) 531-2900
6.02 miles / 15 minutes
Notes

John E Burke School
127 Birch St, Peabody, MA 01960
(978) 531-1600

1.	Start out going **north** on **Birch St** toward **Russell St**. Map	**0.2 Mi** *0.2 Mi Total*
2.	Turn **sharp right** onto **Russell St**. Map *If you are on Russell St and reach Boston St you've gone a little too far*	**1.9 Mi** *2.1 Mi Total*
3.	**Russell St** becomes **Lowell St**. Map	**3.8 Mi** *5.9 Mi Total*
4.	Turn **right** onto **King St**. Map *King St is just past Southwick Rd* *J Henry Higgins Middle School is on the right* *If you reach Kosciusko St you've gone a little too far*	**0.07 Mi** *6.0 Mi Total*
5.	**15 KING ST** is on the **right**. Map *If you reach Ellsworth Rd you've gone a little too far*	

Kindred Hospital-Boston North
15 King St, Peabody, MA 01960
(978) 531-2900

NG Environmental Contractors, LLC
Asbestos • Lead Paint Removal • Select Demolition

July 10th, 2012

James Lambrianidis
Lambrian Construction Corp
384 Washington Street
Westwood, MA 02090

RE: Revised submittal information for the John E. Burke School Window Replacement 127 Birch Street, Peabody, MA

Dear Mr. Lambrianidis,

NG Environmental Contractors LLC would like to submit the following additional information needed to be added to the submittal information that we have already submitted for the John E. Burke School project. Please note, that the information was place according to the manner ATC Associates INC. laid out in their letter dated June 29th, 2012. Please refer to this letter to assist you in re-submitting the submittals to the proper personal that will review all the information needed.

Response to:

1.06.A.1 1. NG Environmental Contractors has already submitted our signed certification

1.06.A.2 1. Please see attached laboratory certifications forms (Attachment "A")

1.06.A.3 1.a Will submit at a later date, incomplete at this time

1.b Will submit at a later date, incomplete at this time

1.c Will submit at a later date, incomplete at this time

1.d Will submit at a later date, incomplete at this time

1.e Will submit at a later date, incomplete at this time

1.f Please see attached documentation (Attachment "B")

1.g Will submit at a later date, incomplete at this time

1.h Will submit at a later date, incomplete at this time

1.i Please see attached documentation (Attachment "C")

1.06.A.5

1.a The two encapsulate colors will be grey and tan. These two colors should have enough contrast to easily spot any chips, dings or other types of damages.

1.b We will roll on one coat of the grey encapsulate, wait till completely dry, then roll on one coat of tan encapsulate, and let that coat dry.

1.c Please see attached sheets to confirm types of substrates (Attachment "D")

1.d We will mix both part A and part B together per manufacturers' instructions

2. Please see attached copy of email confirming encapsulate colors (attachment "E")

1.06.A.6

1. ACMs will be removed first under a full containment, after clearances, we will seal off ceiling with two layers of 6mil polyethylene sheeting. After clearances, we will begin to remove the associated window under a full containment.

2. Per the specs, power washing will be determined by the hygienist on site after removal of window and scraping is complete.

3. The PCB Bulk waste dumpster will be placed in the rear or side of the building to help cut down it's visibility to passing vehicles and pedestrians. The dumpster will be covered with plywood, sealed with 6mil poly, and also have a tarp tied down across the top of the dumpster

4. ACM waste that also contains PCBs will be considered bulk PCB waste and will be placed in the dumpster designated PCB waste will not be transported off the site by NG Environmental Contractors. Service Transport will be the only company to transport PCB bulk waste off the site. PCB waste only. Any items strictly ACM, will be double bagged, labeled, and transported off site via our company vehicles (box truck or van). The ACM waste will be placed in a 100 yard trailer we have on our company grounds in Lawrence, MA.

5. NG Environmental Contractors will clean all univents called out in the plans. We will remove all filters and insulation in the univents, then dispose of them as PCB waste.

6. The two layers poly barrier inside of the building will remain in place for up to two days after removal of ACMs and PCB's are completed to help contain the odors emitted from the hexane and encapsulate. The two layer poly barrier on the outside will be removed after the hygienist on site gives approval that the work area is clear of ACMs and PCBs.

7.a through 7.e All waste generated that is classified as PCB remediation waste will be placed in a 6mil poly bag and then that bag will be placed into another 6mil poly bag. The bags will be in a dumpster which will be transported by Waste Management to their facility in New York.

8. Any tools used for removal of PCBs will be decontaminated with a HEPA vacuum, wiped with clean rags and DECON Solution 1 – 1st wash for unknown contaminants. Please see section 5 of the PCB submittal package for more information.

9. All PPE will be disposed of into a 6mil poly bag and then that bag will be placed into another 6mil poly bag. The bags will be in a dumpster which will be transported by Waste Management to their facility in New York.

1.06.B 1. Waste profile cannot be provided until a sample is taken and a TCLP is preformed. After TCLP is preformed, the results will be sent to Minvera and Waste Management, so that they may generate a waste profile

2. NG Environmental Contractors will obtain their own samples and have a TCLP preformed on the said sample, so that we will have our own results to pass on to the landfills.

1.06.C 1. A specific letter of acceptance was not provided, because NG Environmental Contractors will not receive a letter of acceptance until a profile is generated. We supplied an example of a letter of acceptance to show what we would provide when we are granted a letter.

Attachment "A"

con-test®
ANALYTICAL LABORATORY

39 Spruce Street East Longmeadow, MA 01028 TEL. 413.525.2332 FAX 413.525.6405

July 5, 2012

Mr. Robert Veilleux
NG Environmental
49 Blanchard Street
Lawrence, MA 01843

RE: CERTIFICATION STATEMENT FOR PCB REMEDIATION AT John E. Burke School, 127 Burch Street, Peabody, MA

Dear Mr. Veilleux:

Con-Test Analytical Laboratory has read and understands the extraction, analytical and Quality Assurance/Quality Control requirements for samples associated with the PCB Cleanup and Disposal project at the above referenced site as described in the PCB Remediation Plan for the John E. Burke School, 127 Burch Street, Peabody, MA. As specified in the above plan, analytical method SW846 8082 will be conducted for the analysis of all PCBs. Extraction methods SW846 3540C and SW846 3510C will be utilized for solid and water matrices, respectively.

Please contact the laboratory if you have additional questions. Thank you.

Sincerely,

CON-TEST ANALYTICAL LABORATORY

Michael Erickson
Laboratory Director

Miguel T Baez

137 Willow st Lawrence Ma, 01841

(978) 265-9097

Professional Profile:

I have 10 years of residential and commercial experience in the construction industry that has exposed me to various stages on a construction site ranging from new construction to demolition and remodeling. I have the following certificates:

- Certification as Supervisor/contractor for asbestos removal.
- Standard First AID.
- Certificate training for CPR/AED-adult
- Blood borne Pathogens Training-PDT.
- 10 OSHA card.

Professional Experience:

ACT Abatement Corporation
2001-2004
Position:
Asbestos Worker
Demolition Worker.

NG Environmental Contractors, LLC
2004-2011
Position:
Asbestos Supervisor, Demolition Supervisor.

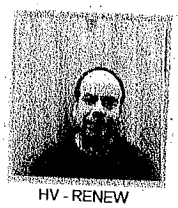
Education:

High School, Lawrence, MA.

Commonwealth of Massachusetts
Department of Labor Standards
Heather E. Rowe, Director
Asbestos Supervisor

MIGUEL T. BAEZ
Eff. Date 03/28/12
Exp. Date 03/27/13
AS000645
Member of C.O.N.E.S.
GLP

13



HV - RENEW

Rhode Island Department of Health
Asbestos Program
Site Supervisor

MIGUEL BAEZ
NG ENVIRONMENTAL CONTRACTORS LLC
Exp. Date: 10/31/2012
License #: LAC-257-4411
Member of C.O.N.E.S.

OSHA 00106O336

Miguel Baez

Construction Safety & Health

Armando Gaitan

MASSACHUSETTS

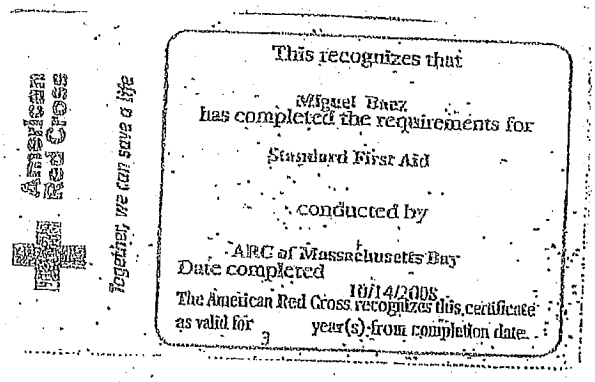
DRIVER'S LICENSE

S12540583

12-15-2013 12-15-1981

BAEZ

LAWRENCE, MA


American Red Cross
Together we can save a life
This recognizes that
Miguel Baez
has completed the requirements for
Standard First Aid
conducted by
ARC of Massachusetts Bay
Date completed
10/14/2008
The American Red Cross recognizes this certificate
as valid for
3
year(s) from completion date.

LAWRENCE TRAINING SCHOOL, INC.

This is to Certify

Miguel T. Baez

Has successfully completed the 40 hour course

Hazardous Waste Operations and Emergency Response

Pursuant to the requirements identified in Title 29 CFR 1910.120.

HMR0612-23-MB9318

Certificate Number

JUN 18 – JUN 23, 2012

Date(s) of Training

JUN 23, 2012

Date of Examination

JUN 23, 2013

Expiration Date

Mario Alcántara

President/Director of Training

50 Pleasant Street Lawrence, MA 01841 | 978-689-7370 | www.lawrencetrainingschool.com

LAWRENCE TRAINING SCHOOL, INC.

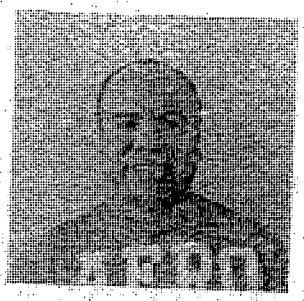
This is to Certify

Miguel T. Baez

Has successfully completed the 8 hour course

Asbestos Contractor/Supervisor Refresher

pursuant to the requirements for asbestos accreditation of the TSCA, Title II



ASR0112-07-MB9318

Certificate Number

JAN 07, 2012

Date(s) of Training

JAN 07, 2012

Date of Examination

JAN 07, 2013

Expiration Date

President/Director of Training

50 Pleasant Street Lawrence, MA 01841 | 978-689-7370 | www.lawrencetrainingschool.com

LAWRENCE WALK-IN MEDICAL CENTER
Neville Nevenzeum, M.D.
100 Franklin Street
Lawrence, MA 01840
(978) 682-8343

EMPLOYERS ASBESTOS CLEARANCE LETTER

NAME: Baez Miguel T. S.S. #: XXXXX 9318

DATE OF EXAM: Oct. 12th 2011 EXP. DATE: Oct 11th 2012

This letter confirms that the above named individual was examined in compliance with the OSHA asbestos standard (29 CFR 1926 - 1101). The required asbestos questionnaire, a medical and work history, and a complete physical examination were performed. Pulmonary function tests (PFT) were administered.

CHEST X-RAYS:
Next indicated in 20 RESULTS: Normal: ✓ Abnormal:

PULMONARY FUNCTION TEST RESULTS: Normal: ✓ Abnormal:

COMMENTS:

The following conditions were identified which may place this employee at increased risk of health impairment from asbestos exposure:

The following limitations on personal protective equipment, including respirators are indicated:

(✓) None: The patient is medically qualified to wear all personal protection equipment.
( ) Patient Limitations:

The employee has been informed of the results of the medical examination, both with regard to occupation and general medical conditions. The employee has been educated about increased risk of lung cancer. Smokers are advised regarding smoking cessation if indicated in accordance with the standard finding and diagnosis unrelated to asbestos exposure may not be communicated to the employer. Also in accordance with the Standard, a copy of this opinion is being forwarded to the employee.

Thank you for the opportunity to examine this individual.

H.L.N. Nevenzeum, M.D.
Physicians Walk-in Medical Center
100 Franklin Street
Lawrence, Ma 01840
Address
978-682-8343

H.L.N. Nevenzeum
Signature
Center
978-682-8343
Phone #

Lawrence Training School · 88 Franklin Street · Lawrence, MA 01841 · Tel 978-689-7370

FIT TEST AND RESPIRATOR TRAINING CHECKLIST

PRUEBA DE AJUSTE DEL RESPIRADOR

The following is a checklist that must be completed for each employee to wear a negative pressure respirator. This form is required every year on all Asbestos or Lead job sites.

I CERTIFY THAT ON THE DATE STATED BELOW I WAS TESTED FOR THE RESPIRATOR TYPE AND MODEL LISTED BELOW. I WAS ALSO GIVEN TRAINING REGARDING THE PROPER USE OF THE RESPIRATOR AND THE MAINTENANCE PROCEDURES REQUIERED.

I FURTHER CERTIFY THAT I UNDERSTAND THE TRAINING PROVIDED TO ME AND KNOW THAT THE USE OF A RESPIRATOR UNDER CONDITIONS CONTRARY TO THOSE OUTLINED AS APPROPRIATE IN THE TRAINING AND TEST SESSION MAY NOT PROVIDE ADEQUATE PROTECTION.

Qualified Instructorignature: _____

Employee/Subcontractor Signature: _____
Miguel T. Baez002711

Date: JUN 27, 2011

1. Challenge substance: (Circle One) Irritant Smoke Oil Saccharin

2. Fit Check Procedures:

   A. Negative Pressure Check (PASS) FAIL B. Positive Pressure Check (PASS) FAIL

3. Testing Procedure:

   a. Normal breathing — Reaction: None
   b. Deep breathing
   c. Turn head from side to side
   d. Nod head up and down
   e. Talking and/or counting backwards from 100
   f. Jogging in place
   g. Bend over and touch toes
   h. Grimace and frown
   i. Repeat rainbow passage
   j. Breathe normally

4. Overall Evaluation: (PASS) FAIL

5. Respirator Approvals: Manufacture: North

Type HALF-FACE

Approval #LTS0611-27-MB9318

Size M

OSHA Occupational Safety and Health Administration

11-003395941

This card acknowledges that the recipient has successfully completed a 10-hour Occupational Safety and Health Training Course in
Construction Safety and Health

Alexander Hernandez

Maria Alcantara
(Trainer name – print or type)

04/30/11
(Course end date)

Commonwealth of Massachusetts
Department of Labor Standards
Heather E. Rowe, Director
Asbestos Worker

ALEXANDER HERNANDEZ
Eff. Date 05/02/12
Exp. Date 05/01/13
AW007704
Member of C.O.N.E.S.
HV

13

HV - RENEW

LAWRENCE TRAINING SCHOOL, INC.

This is to Certify

Alexander Hernandez

Has successfully completed the 40 hour course

Hazardous Waste Operations and Emergency Response

Pursuant to the requirements identified in Title 29 CFR 1910.120.

HMR0612-23-AH6215

Certificate Number

JUN 18 – JUN 23, 2012

Date(s) of Training

JUN 23, 2012

Date of Examination

JUN 23, 2013

Expiration Date

Mario Skaintars

President/Director of Training

50 Pleasant Street Lawrence, MA 01841 | 978-689-7370 | www.lawrencetrainingschool.com

LAWRENCE TRAINING SCHOOL, INC.

This is to Certify

Alexander B. Hernandez

Has successfully completed the 8 hour course

Asbestos Worker Refresher-Spanish

pursuant to the requirements for asbestos accreditation of the TSCA, Title II

AR0412-21-AH6215
Certificate Number

APR 21, 2012
Date(s) of Training

APR 21, 2012
Date of Examination

APR 21, 2013
Expiration Date

Mario Alcántara
President/Director of Training

50 Pleasant Street Lawrence, MA 01841 | 978-689-7870 | www.lawrencetrainingschool.com

LAWRENCE WALK-IN MEDICAL CENTER
NEVILLE NAVARATNAM, M.D
100 Franklin Street
Lawrence, MA 01840
(978)682-8343

EMPLOYERS ASBESTOS CLEARANCE LETTER

ME: Hernandez Alexander S.S #: XXXX 5327

TE OF EXAM: April 12th 2012 EXP. DATE: April 11th 2013

s letter confirms that the above named individual was examined in compliance with the OSHA asbestos standard
) CFR 1926 - 1101). The required asbestos questionnaire, a medical and work history, and a complete physical examination
'e performed. Pulmonary function tests (PFT) were administered.

EST X-RAYS:
Next indicated in 20 RESULTS: Normal: ✓ Abnormal:

-MONARY FUNCTION TEST RESULTS:
Normal: Abnormal:

MMENTS:

following conditions were identified which may place this employee at increased risk of health impairment from asbesto
osure:

following limitations on personal protective equipment, including respirators are indicated:
None: The patient is medically qualified to wear all personal protection equipment.
Patient Limitations:

employee has been informed of the results of the medical examination, both with regard to occupation and general medical
itions. The employee has been educated about increased risk of lung cancer. Smokers are advised regarding smoking
ation if indicated in accordance with the standard finding and diagnosis unrelated to asbestos exposure may not be
nunicated to the employer. Also in accordance with the Standard, a copy of this opinion is being forwarded to the employee.

k you for the opportunity to examine this individual.

cian R.L.N. Navaratnam
Signature

R.L.N. Navaratnam M.D.
Lawrence Walk-in Medical Center center
100 Franklin Street
ss Lawrence, Ma 01840 978-682-8343
978-682-8343 Phone#

Lawrence Training School 50 Pleasant Street Lawrence, MA 01841· Tel 978-689-7370

FIT TEST AND RESPIRATOR TRAINING CHECKLIST

PRUEBA DE AJUSTE DEL RESPIRADOR

The following is a checklist that must be completed for each employee to wear a negative pressure respirator. This form is required every year on all Asbestos or Lead job sites.

I CERTIFY THAT ON THE DATE STATED BELOW I WAS TESTED FOR THE RESPIRATOR TYPE AND MODEL LISTED BELOW. I WAS ALSO GIVEN TRAINING REGARDING THE PROPER USE OF THE RESPIRATOR AND THE MAINTENANCE PROCEDURES REQUIERED.

I FURTHER CERTIFY THAT I UNDERSTAND THE TRAINING PROVIDED TO ME AND KNOW THAT THE USE OF A RESPIRATOR UNDER CONDITIONS CONTRARY TO THOSE OUTLINED AS APPROPRIATE IN THE TRAINING AND TEST SESSION MAY NOT PROVIDE ADEQUATE PROTECTION.

Qualified Instructor signature: Maria [signature]

Employee/Subcontractor Signature: Alexander Bell Hernandez

Alexander Hernandez042112

Date: APR 21, 2012

1. Challenge substance: (Circle One) (Irritant Smoke) Oil Saccharin
2. Fit Check Procedures:
   A. Negative Pressure Check (PASS) / FAIL B. Positive Pressure Check (PASS) / FAIL
3. Testing Procedure :

	Reaction
a. Normal breathing	None
b. Deep breathing	
c. Turn head from side to side	
d. Nod head up and down	
e. Talking and/or counting backwards from 100	
f. Jogging in place	
g. Bend over and touch toes	
h. Grimace and frown	
I. Repeat rainbow passage	
j. Breathe normally	

4. Overall Evaluation: (PASS) / FAIL

5. Respirator Approvals: Manufacture: North Approval # AWR0412-21-AH6215

Type HALF-FACE Size M

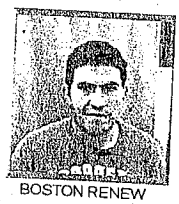
Commonwealth of Massachusetts
Department of Labor Standards
Heather E. Rowe, Director

Asbestos Worker

CARLOS A. ELVIRA

Eff. Date 05/25/12
Exp. Date 05/25/13
AW007794
Member of C.O.N.E.S.
BSR

13



BOSTON RENEW

FROM Received: Jun 29 2012 03:22pm
(SUN)MAR 19 2000 6:18/ST. 6:14/No. 7500000069 P 6

LAWRENCE TRAINING SCHOOL, INC.

This is to Certify

Carlos H. Elvira Lopez

Has successfully completed the 40 hour course

Hazardous Waste Operations and Emergency Response

Pursuant to the requirements identified in Title 29 CFR 1910.120.

HMR0612-23-CE6018
Certificate Number

JUN 18 – JUN 23, 2012
Date(s) of Training

JUN 23, 2012
Date of Examination

JUN 23, 2013
Expiration Date

President/Director of Training

50 Pleasant Street Lawrence, MA 01841 | 978-689-7370 | www.lawrencetrainingschool.com

LAWRENCE TRAINING SCHOOL, INC.

88 Franklin Street, Lawrence, MA 01840

Telephone: (978) 689-7370

This is to certify that

Carlos H. Elvira

has successfully completed the 10-hour course

Occupational Safety and Health Standards for the Construction Industry

OSHA-CE6018

Certificate Number

JUN 18 & JUN 25, 2011

Dates of Training

JUN 25, 2011

Date of Examination

Maria Alcantara

Trainer

LAWRENCE TRAINING SCHOOL, INC.

This is to Certify

Carlos H. Elvira

Has successfully completed the 8 hour course

Asbestos Worker Refresher-Spanish

pursuant to the requirements for asbestos accreditation of the TSCA, Title II

AWR0512-12-CE6018

Certificate Number

MAY 12, 2012

Date(s) of Training

MAY 12, 2012

Date of Examination

MAY 12, 2013

Expiration Date

Mario Alcántara

President/Director of Training

50 Pleasant Street Lawrence, MA 01841 | 978-689-7370 | www.lawrencetrainingschool.com

LAWRENCE WALK-IN MEDICAL CENTER
NEVILLE NAVARATNAM, M.D
100 Franklin Street
Lawrence, MA 01840
(978)682-8343

EMPLOYERS ASBESTOS CLEARANCE LETTER

NAME: ELVIRA CARLOS S.S #: XXXXX 6018

DATE OF EXAM: May 3rd 2012 EXP. DATE: May 2nd 2013

This letter confirms that the above named individual was examined in compliance with the OSHA asbestos standard. (29 CFR 1926 - 1101). The required asbestos questionnaire, a medical and work history, and a complete physical examination were performed. Pulmonary function tests (PFT) were administered.

CHEST X-RAYS: RESULTS: Normal: ✓ Abnormal: _____
Next indicated in 20
PULMONARY FUNCTION TEST RESULTS: Normal: _____ Abnormal: _____

COMMENTS:

The following conditions were identified which may place this employee at increased risk of health impairment from asbesto exposure:

The following limitations on personal protective equipment, including respirators are indicated:
(✓) None: The patient is medically qualified to wear all personal protection equipment.
( ) Patient Limitations: _____

The employee has been informed of the results of the medical examination, both with regard to occupation and general medical conditions. The employee has been educated about increased risk of lung cancer. Smokers are advised regarding smoking cessation if indicated in accordance with the standard finding and diagnosis unrelated to asbestos exposure may not be communicated to the employer. Also in accordance with the Standard, a copy of this opinion is being forwarded to the employee.

Thank you for the opportunity to examine this individual.

R.L.N. Navaratnam
Physician Signature

R.L.N. Navaratnam
Lawrence Walk-In Medical Center
100 Franklin Street
Lawrence, MA 01840
978-682-8343
center

Address

978-682-8343
Phone#

LAWRENCE TRAINING SCHOOL, INC.
Alternative Education & Career Path for Adults
SDO (MBE/WBE &DBE) CERTIFIED

FIT TEST AND RESPIRATOR TRAINING CHECK LIST

PRUEBA DE AJUSTE DEL RESPIRADOR

The following is a checklist that must be completed for each employee to wear a negative pressure respirator. This form is required every year on all Asbestos or Lead job sites.

I CERTIFY THAT ON THE DATE STATED BELOW I WAS TESTED FOR THE RESPIRATOR TYPE AND MODEL LISTED BELOW. I WAS ALSO GIVEN TRAINING REGARDING THE PROPER USE OF THE RESPIRATOR AND THE MAINTENANCE PROCEDURES REQUIERED.

I FURTHER CERTIFY THAT I UNDERSTAND THE TRAINING PROVIDED TO ME AND KNOW THAT THE USE OF A RESPIRATOR UNDER CONDITIONS CONTRARY TO THOSE OUTLINED AS APPROPRIATE IN THE TRAINING AND TEST SESSION MAY NOT PROVIDE ADEQUATE PROTECTION.

Qualified Instructor Signature: Maria Alcantara

Employee/Subcontractor Signature: Carlos Elvira

Carlos H. Elvira05122012

Date: MAY 12, 2012

1. Challenge substance: (Circle One) Irritant Smoke Oil Saccharin
2. Fit Check Procedures:
   A. Negative Pressure Check (PASS / FAIL) B. Positive Pressure Check (PASS) / FAIL
3. Testing Procedure :

	Reaction
a. Normal breathing	good
b. Deep breathing	
c. Turn head from side to side	
d. Nod head up and down	
e. Talking and/or counting backwards from 100	
f. Jogging in place	
g. Bend over and touch toes	
h. Grimace and frown	
i. Repeat rainbow passage	
j. Breathe normally	

4. Overall Evaluation: (PASS / FAIL)
5. Respirator Approvals:

Approval: AR0512-12-CE6018

Type HALF-FACE

Size M

Commonwealth of Massachusetts
Department of Labor Standards
Heather E. Rowe, Director
Asbestos Worker

RIGOBERTO REYES
Eff. Date 08/15/11
Exp. Date 08/14/12
AW008171
Member of C.O.N.E.S.
BO

12


BOSTON-NEW

88 Franklin Street, Lawrence, MA 01841
978-689-7370

This is to certify that Rigoberto Reyes Estrada
Has successfully completed the 10-hours training course in
Occupational Safety and Health
Standards for the Construction Industry.
On Aug 06, 2011 Mario Alcantara
Temporary 10 Hrs. Card

Mario Alcantara

LAWRENCE TRAINING SCHOOL, INC.

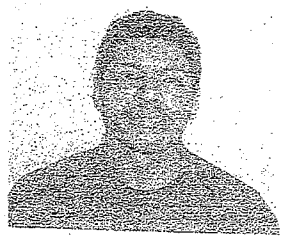
This is to Certify

Rigoberto Reyes Estrada

Has successfully completed the 40 hour course

Hazardous Waste Operations and Emergency Response

Pursuant to the requirements identified in Title 29 CFR 1910.120.



HMR0612-23-RR2086

Certificate Number

JUN 18– JUN 23, 2012

Date(s) of Training

JUN 23, 2012

Date of Examination

JUN 23, 2013

Expiration Date

Mario Alcántara

President/Director of Training

50 Pleasant Street Lawrence, MA 01841 | 978-689-7370 | www.lawrencetrainingschool.com

LAWRENCE TRAINING SCHOOL, INC.

This is to Certify

Rigoberto Reyes

Has successfully completed the 32 hour course

Asbestos Worker Initial-Spanish

pursuant to the requirements for asbestos accreditation of the TSCA, Title II

AI0811-12-RR2086

Certificate Number

AUG 09 - AUG 12, 2011

Date(s) of Training

AUG 12, 2011

Date of Examination

AUG 12 2012

Expiration Date

Mario Alcántara

President/Director of Training

50 Pleasant Street Lawrence, MA 01841 | 978-689-7370 | www.lawrencetrainingschool.com

LAWRENCE TRAINING SCHOOL, INC.

This is to Certify

Rigoberto Reyes Estrada

Has successfully completed the 10 hour course

Occupational Safety and Health Standards for the Construction Industry

OSHA0811-06-RR2086

Certificate Number

JUL 30-AUG 06, 2011

Date(s) of Training

AUG 06, 2011

Date of Examination

Maria Alcantara

Trainer

50 Pleasant Street Lawrence, MA 01841 | 978-689-7370 | www.lawrencetrainingschool.com

LAWRENCE WALK-IN MEDICAL CENTER
Neville Navaratnam,M.D.
100 Franklin Street
Lawrence, MA 01840
(978) 682-8343

EMPLOYERS ASBESTOS CLEARANCE LETTER

NAME: Reyes Rigoberto S.S. #: XXXXX2086

DATE OF EXAM: Aug 15th 2011 EXP. DATE: Aug. 14th 2012

This letter confirms that the above named individual was examined in compliance with the OSHA asbestos standard (29 CFR 1926. - 1101) The required asbestos questionnaire, a medical and work history, and a complete physical examination were performed. Pulmonary function tests (PFT) were administered.

CHEST X-RAYS: RESULTS: Normal: ✓ Abnormal: _____
Next indicated in 20
PULMONARY FUNCTION TEST RESULTS: Normal: ✓ Abnormal: _____
COMMENTS: _____

The following conditions were identified which may place this employee at increased risk of health impairment from asbestos exposure: _____

The following limitations on personal protective equipment, including respirators are indicated:
(✓) None: The patient is medically qualified to wear all personal protection equipment.
( ) Patient Limitations: _____

The employee has been informed of the results of the medical examination, both with regard to occupation and general medical conditions. The employee has been educated about increased risk of lung cancer. Smokers are advised regarding smoking cessation if indicated in accordance with the standard finding and diagnosis unrelated to asbestos exposure may not be communicated to the employer. Also in accordance with the Standard, a copy of this opinion is being forwarded to the employee.

Thank you for the opportunity to examine this individual.

Physician: Neville Navaratnam, M.D. Signature
Lawrence Walk-in Medical Center Center
100 Franklin Street 978-682-8343
Address Lawrence, Ma 01840 Phone #
978-682-8343

Spirometry Report
Puritan-Bennett Renaissance II
S/N: G040702007
Version: 1.2.0

Session Date: 15AUG2011
Session Time: 02:59PM
Last Cal Check: 01JAN2000

BEST FVC/FVL REPORT

ID: XXXXX2086
Name: REYES RIGOBERTO
Gender: MALE
Medication:
Dosage:

Height: 66" Physician:
Age: 32YRS Technician:
Weight: 165LBS
Smoker: NO
Ethnicity/Correction: HISPANIC 14.5%

Sensor Code: 339772
Temperature: 59F
Barometric Press: 760mmHg
BTPS Correction: 1.136
Normals: KNUDSON 83

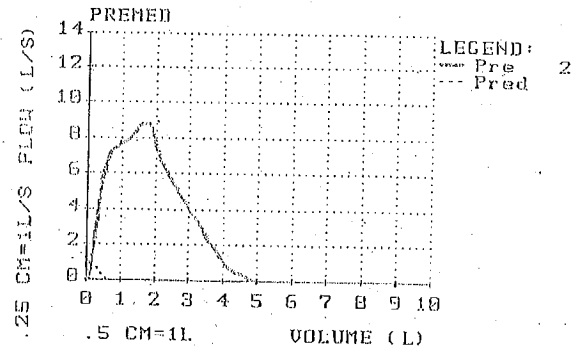
Clinical Format: PREMED - 03:00PM
Best Criteria: VAL

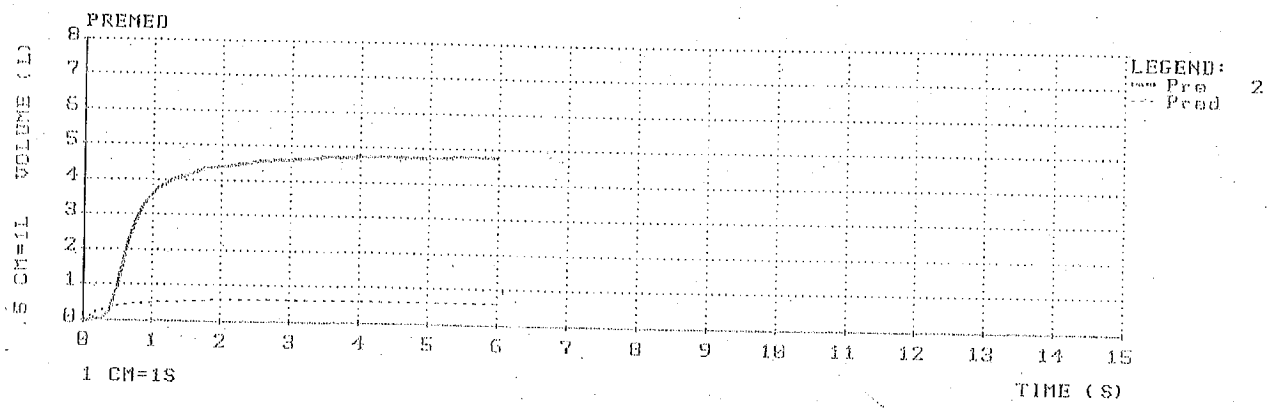
< Indicates Below LLN

MEASUREMENT	BEST	Trial	%Pred	Pred	LLN
FVC (L)	4.85	2	752	0.64	0.52
FEV1 (L)	4.11	2	761	0.54	0.43
FEV1%	85		94	90	78
FEF25-75 (L/S)	4.95	2	842	0.59	
PEF(L/S)	8.92	2	709	1.26	
FET (S)	4.28	2			

Report Summary:
Pre Med: Tests 2 Acceptable 0 Reproducible 0 FVC VAR: FEV1 VAR: PEF VAR:

ATS Interpretation: PREMED - Normal Spirometry
Comment:





R.L.N. nasmith

R.L.N. Nasmith, M.D.
Lawrence Walk-in Medical Center
100 Franklin Street
Lawrence, Ma 01840
978-682-8343

·Lawrence Training School · 50 Pleasant Street ·Lawrence, MA 01841· Tel 978-689-7370·

FIT TEST AND RESPIRATOR TRAINING CHECKLIST

PRUEBA DE AJUSTE DEL RESPIRADOR

The following is a checklist that must be completed for each employee to wear a negative pressure respirator. This form is required every year on all Asbestos or Lead job sites.

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I FURTHER CERTIFY THAT I UNDERSTAND THE TRAINING PROVIDED TO ME AND KNOW THAT THE USE OF A RESPIRATOR UNDER CONDITIONS CONTRARY TO THOSE OUTLINED AS APPROPRIATE IN THE TRAINING AND TEST SESSION MAY NOT PROVIDE ADEQUATE PROTECTION.

Qualified Instructorignature: Yanira Montalvo

Employee/Subcontractor Signature: Rigoberto Reyes 081111

Date: AUG 11, 2011

1. Challenge substance: (Circle One) (Irritant Smoke) Oil Saccharin

2. Fit Check Procedures:

A. Negative Pressure Check (PASS) / FAIL B. Positive Pressure Check (PASS) / FAIL

3. Testing Procedure :

	Reaction
a. Normal breathing	none
b. Deep breathing	
c. Turn head from side to side	
d. Nod head up and down	
e. Talking and/or counting backwards from 100	
f. Jogging in place	
g. Bend over and touch toes	
h. Grimace and frown	
i. Repeat rainbow passage	
j. Breathe normally	

4. Overall Evaluation: (PASS) / FAIL

5. Respirator Approvals: Manufacture: North Approval # ASI0811-11-RR2086

Type HALF-FACE Size M

Attachment "C"

NG Environmental Contractors, LLC
Asbestos • Lead Paint Removal • Select Demolition

PROJECT:

JOHN E. BURKE SCHOOL WINDOW REPLACEMENT
MSBA GREEN REPAIR PROGRAM

CHAIN OF COMMAND

PRESIDENT
NOLBERTO GALICIA

PROJECT MANAGER:
ROBERT VEILLEUX

SUPERVISOR

MIGUEL T. BAEZ

WORKERS:

ALEXANDER HERNANDEZ
CARLOS ELVIRA
RIGOBERTO REYES ESTRADA

Attachment "D" 1 of 5

Revised March 2009

Construction

Sikagard®-62

Solvent free epoxy coating

Description	Sikagard-62 is a two component high build thixotropic protective coating based on epoxy resin. When cured Sikagard-62 provides a hard, glossy film with high resistance to abrasion and chemical attack.
Uses	Sikagard-62 is successfully used for concrete and steel protection in the following applications: waterproof internal reservoir coatings, interior or exterior (when not subject to UV irradiation) protective coating for silos, pipes, tunnels and galleries. Also in laundries, factories, chemical process areas, sewage treatment works, dairies etc as an impervious chemical resistant coating for floors and walls. Sikagard-62 is vapour proof. When Sikadur Silica Aggregate is applied to the final coat of Sikagard-62 an extremely hard wearing anti-skid, waterproof, chemical resistant finish is obtained.
Advantages	▪ Protective and decorative. ▪ Excellent chemical resistance. ▪ Easy for cleaning and graffiti removal. ▪ High abrasion resistance. ▪ Excellent adhesion to most building materials. ▪ Approved for use with potable water.
Storage and Shelf Life	Stored in the original sealed containers within the temperature range of +5°C to +35°C, this product will keep for a minimum of three (3) years.

Instructions for Use

Surface Preparation	The substrate must be sound, dry, free from dust and any surface contaminants (e.g. oil, grease, fats, chemicals, rust, paint, form release and curing membrane residues, etc.) Blow holes or irregularities should be filled and the substrate levelled with appropriate Sikafloor or Sikadur mortars prior to application of Sikagard-62. This is essential in all areas of contained liquids or water. On steel structures light abrasion of the substrate is recommended. Pre-seal the surface of porous and/or damp substrates with Sikagard-720 EpoCem. This is a very fine fairing mortar formulated on a hybrid epoxy resin/cementitious base. Sikagard-720 should be applied in conditions of falling substrate temperature to avoid the formation of pin holes, blow holes or drumminess caused by expanding air in the porous substrate. Cementitious materials other than EpoCem should be at least 3 or 4 weeks old and should be prepared by mechanically wire-brushing, acid etching, scarifying, abrasive blasting or high pressure water blasting.
Mixing	Sikagard-62 is supplied in preweighed containers. Mix all of Part B with all of Part A and the pigment pack in the large container using a low speed drill and windmill stirrer (max. 600 rpm). Mix until no streaks of colour are visible (about 3 to 5 minutes). Mix so as not to entrap too much air in the product. Use immediately. Application is made easier if materials are stored at between 15°C to 23°C for 24 hours prior to mixing.
Application	Sikagard-62 is may be applied by brush, roller or airless spray. Apply at least the first coat to porous substrates when the substrate temperature is falling. Ideally, start the coating application at sunset. The air in the substrate pores will be contracting then and will physically suck the coating into the pores and cracks enhancing the penetration and sealing function of the coating. Apply a minimum of two coats (three coats for chemical and high mechanical resistance). Ideally, use differing colours on each coat to enable easier application and site control. Recoating should occur when the previous coat can still be clearly pressed in with a fingernail. If recoating cannot be carried out within 48 hours, roughen surface with glass paper, wipe with Sika Colma Cleaner and recoat without delay.

Construction

Cleaning	Uncured material may be cleaned from application tools, etc. by using Sika Colma Cleaner (flammable solvent). Cured material can only be removed mechanically.

Technical and Physical Data

Form	Liquid thixotropic epoxy resin
Mixing Ratio	Ratio by volume A : B = 2.1 : 1 Ratio by weight A : B = 3 : 1
Density	1.35 kg / litre
Consumption/Coverage	0.25 - 0.4 kg / m^2 per coat depending on method of application, temperature, and surface texture, at the recommended film thickness per coat. Normally 2 - 3 coats.
Potlife (12 kg mix)	30 minutes approx. @ 20°C - at higher temperatures potlife is reduced. - at lower temperatures potlife is extended. Refer 'Important Notes'
Maximum relative humidity during cure	85%
Application temperature	Minimum 5°C, Maximum 30°C
Maximum intercoat period	48 hours @ 20°C
Maximum thickness per coat	150 - 200 microns
Coefficient of thermal expansion (-10°C to +40°C)	7.5 x 10^{-5}mm/m/°C approx.
Temperature resistance (without chemical or mechanical action)	Permanent Maximum: dry 70°C wet 60°C

Approximate cure times

	30°C	20°C	10°C
Repaintable after	5 hours	10 hours	18 hours
Walkable after	8 hours	17 hours	24 hours
Full chemical resistant cure	9 days	12 days	15 days

Note: Sikagard-62 reaches 90% of its full cure at 20°C in 4 days.

Mechanical strengths (At 7 days)		
	Tensile strength	25MPa approx.
	Elongation at break	10% approx.
	Compressive strength	50MPa approx.
	Flexural tensile strength	50MPa approx.
	E-Modulus (dynamic)	30-40.10^2 MPa approx.

Adhesive strength (DIN 53232)		
	To dry concrete approx.	3.5 MPa *
	To sandblasted steel approx.	25 MPa
	To aluminium approx.	16 MPa
	** failure in concrete*	

Colour	Standard colours as per Sikafloor colour chart		
Packaging	Pre-proportioned 2 part kit:	Part A:	8.4 kg
		Part B:	3.0 kg
		Pigment Pack	600 g

Construction

Suitability for use in drinking water	Complies with the requirements of AS 4020: 2005 (Int) – 1994 at a maximum allowable surface area to volume ration of 3365 mm² /litre of water
Chemical resistance	(3 coats on sheet steel - 500 microns approximately).

Test Medium	Test Temp °C	Exposure Period and Performance Rating					
		1 day	7 days	30 days	2 mths	6 mths	12 mths
Acetic acid 20%	20	A	A	A	A	AD	C
	40	A	A	A	AD	C	-
Ethyl Acetate	20	A	B	C	-	-	-
Acetone	20	A	C	-	-	-	-
Ammonia 10%	20	A	A	A	A	A	A
Ammonia 10%	40	A	A	A	A	A	AD
Caustic Soda 30%	20	A	A	A	A	A	A
Cement water	20	A	A	A	A	A	AD
	40	A	A	A	A	A	BD
Citric Acid 20%	20	A	A	A	A	AD	AD
	40	A	A	AD	AD	AD	AD
Detergents (eg. liquid	20	A	A	A	A	A	A
"Ajax")	40	A	A	A	A	AD	AD
Distilled water	20	A	A	A	A	A	A
	40	A	A	A	A	A	AD
	60	A	A	A	BD	BD	BD
Ethanol	20	A	A	A	B	C	-
	40	A	B	C	-	-	-
Ethanol/Water 60:40	20	A	A	A	A	A	A
Formic acid 10%	20	A	A	A	A	A	B
Fuel oil (EMPA)	20	A	A	A	A	A	A
	40	A	A	A	A	A	A
	60	A	A	A	A	A	A
Hydraulic fluids	20	A	A	A	A	A	A
(eg. "Arcosafe", "Skydrol")	40	A	A	A	A	B	C
Hydrochloric acid, 10%	20	A	A	A	A	A	A
Hydrochloric acid,	20	A	AD	AD	AD	AD	AD
concentrated	40	AD	AD	AD	BD	C	-
Hydrogen peroxide 5%	20	A	A	A	A	B	B
Iron (III) chloride sol. 35%	20	A	A	AD	AD	AD	AD
	40	A	A	AD	AD	AD	AD
Iron (II) sulphate sol. 35%	20	A	AD	AD	AD	AD	AD
	40	A	AD	AD	AD	AD	AD
Sodium Hypochlorite 14% Cl	20	A	A	AD	BD	BD	C
Kerosene	20	A	A	A	A	A	A
	40	A	A	A	A	A	A
Lactic acid 20%	20	A	A	A	AD	BD	C
	40	A	A	AD	C	-	-

Construction

Chemical resistance (3 coats on sheet steel - 500 microns approximately).

Test Medium	Test Temp °C	Exposure Period and Performance Rating					
		1 day	7 days	30 days	2 mths	6 mths	12 mths
Liquid manure	20	A	A	A	A	A	AD
	40	A	A	A	AD	AD	AD
Liquid silage	20	A	A	A	AD	AD	AD
	40	A	A	AD	BD	BD	BD
Methyl ethyl ketone MEK	20	A	C	-	-	-	-
Nitric acid 20%	20	AD	AD	AD	C	-	-
	40	AD	AD	C	-	-	-
Oxalic acid 10%	20	A	A	AD	AD	BD	C
	40	A	AD	AD	C	-	-
Phosphoric acid 40%	20	A	AD	AD	BD	BD	C
	40	AD	AD	BD	C	-	-
Potassium permanganate 10%	20	A	A	B	C	-	-
Red wine	20	A	A	A	A	A	A
Sodium Carbonate Solution	20	A	A	A	A	A	A
(saturated)	40	A	A	A	A	A	A
Sodium Chloride solution	20	A	A	A	A	A	A
(saturated)	40	A	A	A	A	A	A
Sodium sulphite solution	20	A	A	A	A	A	A
(saturated)	40	A	A	A	A	A	A
Styrene	20	A	A	A	A	A	B
Sulphuric acid 50%	20	AD	AD	AD	AD	AD	AD
	40	AD	AD	AD	AD	AD	AD
Sulphurous acid 5%	20	A	A	AD	AD	AD	BD
	40	A	AD	AD	AD	AD	BD
Tartaric acid 20%	20	A	A	A	A	A	A
Toluene	20	A	A	B	B	B	B
	40	A	A	B	B	B	C
Trichloroethylene	20	A	B	C	-	-	-
Water	20	A	A	A	A	A	A
	40	A	A	A	A	A	A
	60	A	A	A	B	B	B
White wine	20	A	A	A	A	A	A

For information about resistance to other media, please consult our Technical Department.
A = resistant to prolonged contact
B = temporarily resistant
C = breakdown of coating
D = discolouration of coating

Construction

Important Notes

- Do not dilute the product as this will affect in-service performance. Thinners or solvents must not be used.
- For application in damp conditions please consult our Technical Department for further information.
- Do not part mix containers.
- Do not mix and apply product that has a temperature of greater than 30°C. If applying at higher than 30°C, as soon as the Sikagard-62 is mixed transfer the container into an esky containing ice to just below the rim of the container, and then apply the Sikagard-62 from the open container in the esky.
- The temperature at which the Sikagard-62 is stored during the 24 hours before it is mixed will govern its potlife when mixed.
- If the temperature of a porous substrate (which includes the vast majority of concrete) is rising i.e. is in direct sunlight prior to late afternoon, the air in the pores and cracks is expanding and if a wet coating is placed over such a substrate the expanding air will blow bubbles in the coating and prevent the liquid coating penetrating the substrate pores and cracks etc. Prior to the coating reaching the gel phase the bubbles will burst and leave "pin holes" in the coating, whereas when in the gel phase bubbles will be "frozen" into the cured coating. These bubbles will be a weak point in the coating as their wall thickness will be less than the applied film thickness on the substrate.
- To avoid unsightly water spotting do not apply Sikagard-62 when ambient temperature will reach "dew point" before the coating has cured.
- Similarly do not allow water to contact Sikagard-62 that is not seven (7) days old @ 20°C or older at lower temperatures since it will mark the coating.
- Do not apply Sikagard-62 to cementitious mortars that are modified with acrylic, acrylic co-polymer, EVA or PVA polymers (eg. SikaTops or Sika MonoTops) because under certain environmental conditions hardened mortar or render may swell slightly and crack the rigid epoxy coating.
- Light colours will yellow with exposure to sunlight or UV radiation
- Please consult our Technical Department for further information.

Handling Precautions

- Avoid contact with the skin, eyes and avoid breathing its vapour.
- Wear protective gloves when mixing or using.
- If poisoning occurs, contact a doctor or Poisons Information Centre.
- If swallowed, do NOT induce vomiting. Give a glass of water.
- If skin contact occurs, remove contaminated clothing and wash skin thoroughly.
- If in eyes, hold eyes open, flood with water for at least 15 minutes and see a doctor.

Important Notification

The information, and, in particular, the recommendations relating to the application and end-use of Sika's products, are given in good faith based on Sika's current knowledge and experience of the products when properly stored, handled and applied under normal conditions. In practice, the differences in materials, substrates and actual site conditions are such that no warranty in respect of merchantability or of fitness for a particular purpose, nor any liability arising out of any legal relationship whatsoever, can be inferred either from this information, or from any written recommendations, or from any other advice offered. The proprietary rights of third parties must be observed. All orders are accepted subject of our terms and conditions of sale. Users should always refer to the most recent issue of the Technical Data Sheet for the product concerned, copies of which will be supplied on request.

PLEASE CONSULT OUR TECHNICAL DEPARTMENT FOR FURTHER INFORMATION.

Sika Australia Pty Limited
ABN 12 001 342 329

www.sika.com.au
Tel: 1300 22 33 48

Attachment "E"

Nolberto,

For your records. Let me know if you have any questions.

James Lambrianidis
President

From: Elvin Phillips [mailto:ephillips@lpba.com]
Sent: Tuesday, June 26, 2012 2:39 PM
To: jlambrianidis@lambrian.com; mbingley@lpba.com; Ronald Alex
Cc: 'Vivian Low'; 'Dave Keniston'
Subject: FW: Burke School - RFI # 1

jim

i talked to dave keniston and he spoke with judy mcniff. the consensus is to go with this proposal for colors and treat this as a mock up for approval with the grey first coat and the tan finish coat.

regards

Elvin J. Phillips, Architect
Senior Associate
LPBA/ Architects, Inc,
214 Lincoln Street, Unit 305
Boston, MA 02134
t. 617 782 0255
f. 617 782 0277
ephillips@lpba.com

From: Michael Gitten [mailto:michael.gitten@atcassociates.com]
Sent: Monday, June 25, 2012 6:45 PM
To: mbingley@lpba.com; 'Vivian Low'
Cc: 'Ron Alex'; 'Elvin Phillips'; 'Kevin Goggin'; 'Dave Keniston'; Chris Amorelli
Subject: RE: Burke School - RFI # 1

Mike

I did not pick the color. For PCB abatement purposes the only requirement is that it be at least two coats having contrasting colors. As long as it the gray and tan are far enough shades away from each other that it would be obvious when the top coat has been damaged exposing the bottom coat, I have no concerns regarding these colors.
Hexane should be of better quality or equal to the following which can be ordered from Grainger with a couple days notice.

600 West Cummings Park, Suite 5450
Woburn, Massachusetts 01801
www.atcassociates.com
781.932.9400
Fax 781.932.6211

June 29, 2012

Mr. Michael Bingley, Architect
LPBA/ Architects, Inc.
214 Lincoln Street, Unit 305
Boston, Massachusetts 02134

via e-mail: mbingley@lpba.com

RE: NG Environmental Contractors PCB Submittal Review
John E. Burke School Window Replacement
Peabody, Massachusetts
ATC Project No.: 060.41546.0006

Dear Mr. Bingley:

ATC Associates Inc. (ATC) has reviewed the above referenced submittal made to meet the requirements of Technical Specification Removal and Disposal of Polychlorinated Biphenyls Section 028433-1.06.A.-6, B and C for the above referenced project. The submittal should be REVISED AND RESUBMITTED to address the following comments:

1.06.A.1 Signed Certification

1. Both abatement subcontractor and general contractor must provide this certification. The general contractor's certification needs to be submitted.

1.06.A.2 Laboratory Certification

1. This certification is only required if abatement subcontractor will be submitting samples for PCB analysis. If they will be submitting samples for PCB analysis a signed letter from laboratory is required stating that analytical procedures will comply with EPA Methods 8082 and 3540C. The submitted documents are their State certification for drinking water analysis and do not meet this requirement.

1.06.A.3 Site-Specific HASP

1. Site-specific information must be incorporated This should include, but is not limited to:

    a) It should compliment information in the Workplan section of the submittal;
    b) It should compliment asbestos abatement submittal and associated work practices;
    c) Specific requirements due to the presence of PCBs and asbestos within the work zone;
    d) Hazards associated with chemicals to be used during this project, including hexane, paints and encapsulants;
    e) Training requirements;
    f) Training documentation for workers. Records were only provided for Roberto Peralta;
    g) Level of PPE to be used during the project and how decision to change will be made;
    h) Personal air monitoring;
    i) Chain of command:

j) Hospital and other emergency contact information.
k) Posting work areas to identify as PCB and/or asbestos abatement area. .

1.06.A.5 Material Product Data

1. Provide additional information regarding Sikagard.
    a. Color – confirm contrasting color between top and underlying layer(s);
    b. Application method including explanation of type and number of coats that make up the system;
    c. Information demonstrating that the coating /paint is suitable for the substrate to be coated; and
    d. Will both Part A and Part B be used?
2. Architect to review for color and other requirements detailed in Technical Specification 099100 Painting.

1.06.A.6 Workplan

1. Describe how PCB and ACM abatement will be coordinated. Will contractor be requesting asbestos clearance once ceiling tiles are removed?
2. Can it be determined now if power washing will occur?
3. Identify where waste dumpster will be placed and how secured. Dumpsters must be covered;
4. Make sure waste as outlined in this submittal agrees with asbestos submittal. All ACM that is also a PCB waste must be managed as a PCB waste and cannot be transported offsite by NG. This includes, and my not be limited to, interior window surround caulk and exterior window glazing. Material that is solely ACM must be stored separately from PCB and PCB/ACM waste.
5. Include cleaning of Univents;
6. Will containment remain after windows/doors and sealants are removed? Will both poly layers remain?
7. Minerva Landfill cannot accept PCB Remediation Waste that is not part of the window/door units. Identify where remaining PCB Remediation Waste will taken. This includes:
    a. Interior wooden window sills in rooms 101, 108, 109, 116, 201, and 208;
    b. Exterior poured concrete window sills that might become damaged and removed during project;
    c. Interior and exterior wood trim in direct contact with window surround caulk;
    d. Filters and insulation associated with Univents:
    e. Brick surround in direct contact with window surround caulk, except for cafeteria and gymnasium areas; and
    f. Exterior window surround caulk at small gymnasium and cafeteria windows that is not adhered to windows.
8. Describe how tools will be decontaminated; and
9. Describe how PPE and containment material will be disposed of.

1.06.B Waste Profile

1. Waste Profile needs to be completed for Minverva and facility that PCB Remediation Waste will be taken to;
2. Note that the City has no information regarding PCB TCLP results. The contractor will need to generate their own date.

1.06.C Letter of Acceptance

1. A project specific letter of acceptance is required. The provided letter is not accepted.

Corrections or comments made relative to submittals during this review do not relieve the contractor from compliance with the requirements of the drawings and specifications. This check is only for review of general conformance with the design concept of this project and general compliance with the information given in contract documents. The contractor is responsible for confirming and correlating all quantities and dimensions, selecting fabrication processes and techniques, coordinating his work with that of other trades and performing his work in a safe and satisfactory manner.

Should you require any additional information, please contact me at (781) 404-1439.

Respectfully submitted,
ATC Associates Inc.

Michael Gitten, LSP, PE
Division Manager

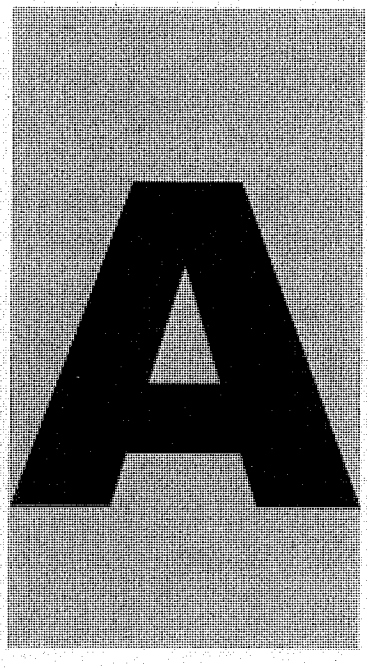
cc: Chris Amorelli, ATC
Vivian Low, Daedalus Projects

NG Environmental Contractors, LLC
Asbestos • Lead Paint Removal • Select Demolition

PCB's SUBMITTALS

JOHN E. BURKE SCHOOL WINDOW REPLACEMENT
MSBA GREEN REPAIR PROGRAM

PEABODY PUBLIC SCHOOLS


A

1

SIGNED CERTIFICATION

NG Environmental Contractors, LLC
Asbestos • Lead Paint Removal • Select Demolition

June 18th, 2010

To Whom It May Concern,

NG Environmental Contractors LLC, would like to formally acknowledge in writing that our company is in complete agreement with and our company fully understands all of the items listed for our scope of work in the specifications set fore for the John E. Burke School Project.

Nocerto Galicia

Print Name

Signed

06-10-2012

Date Signed

49 Blanchard Street . Suite 107. Lawrence, MA 01843
Tel: 978-794-7922. Fax: 978-794-7923. www.ngenvironmental.com

2

LABORATORY CERTIFICATION

The Commonwealth of Massachusetts

Department of Environmental Protection

Division of Environmental Analysis
Senator William X. Wall Experiment Station

certifies

M-MA100

CON-TEST ANALYTICAL LABORATORY
39 SPRUCE ST
EAST LONGMEADOW, MA 01028-0000

Laboratory Director: **MICHAEL ERICKSON**

for the analysis of

NON POTABLE WATER (CHEMISTRY)
POTABLE WATER (MICROBIOLOGY)
POTABLE WATER (CHEMISTRY)

pursuant to 310 CMR 42.00

This certificate supersedes all previous Massachusetts certificates issued to this laboratory. The laboratory is regulated by and shall be responsible for being in compliance with Massachusetts regulations at 310 CMR 42.00.

This certificate is valid only when accompanied by the latest dated Certified Parameter List as issued by the Massachusetts D.E.P. Contact the Division of Environmental Analysis to verify the current certification status of the laboratory.

Certification is no guarantee of the validity of the data. This certification is subject to unannounced laboratory inspections.

Issued: **27 FEB 2012**

Expires: **30 JUN 2012**

Oscar C. Jacobs

Director, Division of Environmental Analysis

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Certified Parameter List as of: 27 FEB 2012

M-MA100 **CON-TEST ANALYTICAL LABORATORY**
EAST LONGMEADOW MA

NON POTABLE WATER (MICROBIOLOGY)

Effective Date 27 FEB 2012 **Expiration Date** 30 JUN 2012

Analytes		Methods
FECAL COLIFORM	WASTEWATER	MF-SM9222D

POTABLE WATER (MICROBIOLOGY)

Effective Date 01 JUL 2011 **Expiration Date** 30 JUN 2012

Analytes		Methods
TOTAL COLIFORM	WATER TREATMENT AND DISTRIBUTION (P/A)	ENZ. SUB. SM9223
E. COLI	WATER TREATMENT AND DISTRIBUTION (P/A)	ENZ. SUB. SM9223
ENTEROCOCCI	SOURCE WATER (P/A)	ENTEROLERT

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Certified Parameter List as of: 24 OCT 2011

M-MA100 CON-TEST ANALYTICAL LABORATORY
EAST LONGMEADOW MA

NON POTABLE WATER (CHEMISTRY) Effective Date 01 JUL 2011 Expiration Date 30 JUN 2012

Analytes	Methods
ALUMINUM	EPA 200.7
ANTIMONY	EPA 200.7
ANTIMONY	EPA 200.8
ARSENIC	EPA 200.7
ARSENIC	EPA 200.8
BERYLLIUM	EPA 200.7
BERYLLIUM	EPA 200.8
CADMIUM	EPA 200.7
CADMIUM	EPA 200.8
CHROMIUM	EPA 200.7
CHROMIUM	EPA 200.8
COBALT	EPA 200.7
COBALT	EPA 200.8
COPPER	EPA 200.7
COPPER	EPA 200.8
IRON	EPA 200.7
LEAD	EPA 200.7
LEAD	EPA 200.8
MANGANESE	EPA 200.7
MANGANESE	EPA 200.8
MERCURY	EPA 245.1
MOLYBDENUM	EPA 200.7
MOLYBDENUM	EPA 200.8
NICKEL	EPA 200.7
NICKEL	EPA 200.8
SELENIUM	EPA 200.7
SELENIUM	EPA 200.8
SILVER	EPA 200.7
SILVER	EPA 200.8
THALLIUM	EPA 200.7
THALLIUM	EPA 200.8
TITANIUM	EPA 200.7
VANADIUM	EPA 200.7
VANADIUM	EPA 200.8
ZINC	EPA 200.7
ZINC	EPA 200.8
PH	SM 4500-H-B
SPECIFIC CONDUCTIVITY	SM 2510B
TOTAL DISSOLVED SOLIDS	SM 2540C
HARDNESS (CACO3), TOTAL	SM 2340C
CALCIUM	EPA 200.7
MAGNESIUM	EPA 200.7
SODIUM	EPA 200.7

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Certified Parameter List as of: 24 OCT 2011

M-MA100 CON-TEST ANALYTICAL LABORATORY
EAST LONGMEADOW MA

NON POTABLE WATER (CHEMISTRY) Effective Date 01 JUL 2011 Expiration Date 30 JUN 2012

Analytes	Methods
POTASSIUM	EPA 200.7
ALKALINITY, TOTAL	SM 2320B
CHLORIDE	SM 4500-CL-B
SULFATE	ASTM D516
AMMONIA-N	SM18-B,C-NES
NITRATE-N	SM 4500-NO3-F
KJELDAHL-N	SM18-B,E/19,20 B,C-TTR
ORTHOPHOSPHATE	SM 4500-P-E
PHOSPHORUS, TOTAL	SM 4500-P-B,E
CHEMICAL OXYGEN DEMAND	EPA 410.4
BIOCHEMICAL OXYGEN DEMAND	SM 5210B
TOTAL ORGANIC CARBON	SM 5310B
CYANIDE, TOTAL	SM 4500-CN-C,E
NON-FILTERABLE RESIDUE	SM 2540D
CHLORINE, TOTAL RESIDUAL	SM 4500-CL-G
OIL AND GREASE	EPA 1664
PHENOLICS, TOTAL	EPA 420.1
VOLATILE HALOCARBONS	EPA 624
VOLATILE AROMATICS	EPA 602
VOLATILE AROMATICS	EPA 624
CHLORDANE	EPA 608
TOXAPHENE	EPA 608
ALDRIN	EPA 608
ALPHA-BHC	EPA 608
BETA-BHC	EPA 608
GAMMA-BHC	EPA 608
DELTA-BHC	EPA 608
DIELDRIN	EPA 608
DDD	EPA 608
DDE	EPA 608
DDT	EPA 608
ENDOSULFAN I	EPA 608
ENDOSULFAN II	EPA 608
ENDOSULFAN SULFATE	EPA 608
ENDRIN	EPA 608
ENDRIN ALDEHYDE	EPA 608
HEPTACHLOR	EPA 608
HEPTACHLOR EPOXIDE	EPA 608
SVOC-ACID EXTRACTABLES	EPA 625
SVOC-BASE/NEUTRAL EXTRACTABLES	EPA 625
POLYCHLORINATED BIPHENYLS (WATEF	EPA 608
POLYCHLORINATED BIPHENYLS (OIL)	EPA 600/4-81-045

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Certified Parameter List as of: 24 OCT 2011

M-MA100 CON-TEST ANALYTICAL LABORATORY
EAST LONGMEADOW MA

POTABLE WATER (CHEMISTRY) Effective Date 24 OCT 2011 Expiration Date 30 JUN 2012

Analytes	Methods
ANTIMONY	EPA 200.8
ARSENIC	EPA 200.8
BARIUM	EPA 200.7
BARIUM	EPA 200.8
BERYLLIUM	EPA 200.8
CADMIUM	EPA 200.7
CADMIUM	EPA 200.8
CHROMIUM	EPA 200.7
CHROMIUM	EPA 200.8
COPPER	EPA 200.7
COPPER	EPA 200.8
LEAD	EPA 200.8
MERCURY	EPA 245.1
NICKEL	EPA 200.7
NICKEL	EPA 200.8
SELENIUM	EPA 200.8
SILVER	EPA 200.7
SILVER	EPA 200.8
THALLIUM	EPA 200.8
NITRATE-N	SM 4500-NO3-F
NITRITE-N	SM 4500-NO2-B
FLUORIDE	SM 4500-F-C
SODIUM	EPA 200.7
CYANIDE, TOTAL	SM 4500-CN-C,E
TURBIDITY	EPA 180.1
CHLORINE, RESIDUAL FREE	SM 4500-CL-G
CALCIUM	EPA 200.7
ALKALINITY, TOTAL	SM 2320B
TOTAL DISSOLVED SOLIDS	SM 2540C
PH	SM 4500-H-B
TRIHALOMETHANES	EPA 524.2
VOLATILE ORGANIC COMPOUNDS	EPA 524.2
1,2-DIBROMOETHANE	EPA 504.1
1,2-DIBROMO-3-CHLOROPROPANE	EPA 504.1

3

SITE-SPECIFIC HASP

HAZWOPER

Hazardous Waste Operations and Emergency Response

Table of Contents

Hazardous Waste & Worker Protection

An Overview

Hazardous waste refers to discarded substances in solid, liquid, or gaseous form that can harm humans, other living organisms, or the environment.

- This is a plain-language definition of hazardous waste. You will find formal definitions in Environmental Protection Agency rules 40 CFR 261.3 and 49 CFR 171.8.

Categories of Employers

- ❑ The Hazardous Waste Operations and Emergency Response standard, (HAZWOPER) applies to the following employers and their employees:

Employer Category	Type of Site
Required **cleanup operations** involving hazardous substances (required by a government agency).	Uncontrolled hazardous-waste sites
Corrective actions involving cleanup operations.	Sites covered by the Resource and Recovery Act (RCRA).
Voluntary cleanup operations.	Uncontrolled hazardous waste sites.
Operations at treatment, storage, and disposal (TSD) facilities.	TSD sites licensed under RCRA.
Emergency response operations (for releases of hazardous substances).	Any site.

What are clean-up operations?

- ❑ These are the activities an employer does to clean up a site containing hazardous substances. What complicates this simple definition are the categories of clean-up operations. They include: Clean-up required by a government agency, cleanup operation on sites covered by the Resource Conservation and Recovery Act (RCRA), and voluntary clean-up operations. "Voluntary" means that a government agency recognizes that a site contains hazardous substances that may pose a safety or health threat to workers or the environment until it is controlled.
- ❑ If you are an employer and you are involved in cleaning up a hazardous-waste site, you must comply.

What are operations at TSD facilities?

- ❑ A TSD facility employs workers who treat, store, or dispose of hazardous waste. If you are a TSD facility employer, you must comply. Included in this category are facilities that generate hazardous waste.

Are municipal or other sanitary landfills covered by HAZWOPER?

- ❑ Yes, if they employ workers who handle or clean up hazardous waste.

Are leaking underground storage tanks considered hazardous waste sites?

- ❑ Yes.

Section I

For Employers Engaged in Required. Corrective, or Voluntary Operations
Contents

- ❑ The Written Safety and Health Program for Cleanup Operations
  - Site Evaluation
  - Organizational Structure
  - Comprehensive Work Plan
  - Site Control
  - Site-Specific Safety and Health Plan
  - Education and Training
  - Medical Surveillance
  - Hazard Control and Personal Protective Equipment (PPE)
  - Air and Personnel Monitoring
  - Informing Employees and Contractors
  - Handling Hazardous Materials
  - Decontamination
  - Emergency Response
  - Illumination
  - Sanitation at Temporary Workplaces
  - Evaluating New Technology

The Written Safety and Health Program for Cleanup Operations

Program Elements

The table below shows the elements that your written Safety and Health Program must include and describes why they are necessary. Use it as a guide to help you develop a new program or evaluate an existing one.

Program Element	Purpose
Site Evaluation	Before your employees begin work at a new site, a qualified person must evaluate the site to identify hazards and to determine how to control the hazards.
Organizational Structure	Establishes the chain of command for directing site operations and defines employees' responsibilities at the site.
Comprehensive Work Plan	Defines the work objectives, the employees' tasks, and the resources employees need to accomplish the tasks.
Site Control	Establishes procedures to control employee exposure to hazardous substances before cleanup work begins at the site.
Site-Specific Safety and Health Program	Identifies risks associated with site-specific hazards and describes procedures for protecting employees from the hazards.
Education and Training	Identifies who must be trained, training topics, frequency of training, and qualifications of trainers.
Medical Surveillance	Describes the purpose of medical examinations, their frequency, what the examinations include, and required information for the physician and the employee.
Hazard Control and PPE	Describes the engineering controls, work practices, and personal protective equipment needed to protect employees.

Program Element	Purpose
Air and Personnel Monitoring	Describes how and when air monitoring will be used to identify and quantify site-specific safety and health hazards.
Informing Employees and Contractors	Informs employees and contractors about hazards they may encounter on the site.
Handling Hazardous Materials	Describes appropriate methods for handling and transporting hazardous materials.
Decontamination	Describes procedures for decontaminating employees exposed to hazardous substances.
Emergency Response	Describes critical activities for dealing with site-specific emergencies.
Illumination	Ensures that employees have enough sight to do their work safely.
Sanitation at Temporary Workplaces	Provides for potable water, toilets, washing, and showering facilities at temporary workplaces.
Evaluating New Technology	Describes policy for evaluating and adopting improved products to protect employees involved in clean-up operations.

Site Evaluation

Purpose

Before your employees begin work at a new site, a qualified person must do a preliminary site evaluation to accomplish the following:

- Identify specific hazards to which employees may be exposed.
- Determine what safety and health controls will protect employees from the hazards. Use the preliminary site evaluation to prepare and update your site-specific safety and health plan. Soon after employees begin working at the site, a qualified person should do a detailed site evaluation.

Site Evaluation Elements

A preliminary site evaluation should provide you with the following information:

- Site hazards, including the physical or chemical properties of hazardous substances and how employees could be exposed to them.
- Employee risks associated with exposure to the hazardous substances.
- Where hazardous substances could leak or disburse.
- Site location, size, topography, and access routes.
- Employees' tasks and the time it will take them to complete the tasks.
- Capabilities of emergency responders, including their availability and response times.
- What personal protective equipment employees will wear.

Informing Employees

You must inform employees about the chemical, physical, and toxicological properties of hazardous substances to which they may be exposed before they begin work at the site.

Organizational Structure

Purpose

The organizational structure is the part of your program that establishes the worksite chain of command and defines supervisors' and other employees' responsibilities.

Chain of Command

The chain of command includes responsibilities for the following individuals:

- A general supervisor, who directs site operations.
- A site safety-and-health supervisor, who develops and implements the site-specific safety-and-health plan.
- The personnel involved in hazardous-waste operations.
- The personnel who will respond to emergencies.

What qualifications does one need to be a site Safety & Health Supervisor?

- ❑ This person must have the authority and knowledge necessary to develop and implement the site-specific safety-and-health plan and to ensure that it complies with requirements.

Comprehensive Work Plan

Purpose

The comprehensive work plan defines your work objectives at the site, the employees' tasks, and the resources your employees need to accomplish the objectives.

Plan Elements

The comprehensive work plan includes the following elements:

- Anticipated cleanup activities at the site.
- The personnel needed to accomplish the work objectives at the site.
- Training necessary for supervisors and other employees to accomplish their tasks.
- How you will inform employees about hazards they may encounter at the site.
- How you will implement medical surveillance for employees who work at the site.

Site Control

Purpose

Site control establishes procedures and safe practices to ensure that your employees will be protected from hazardous substances before they begin work on the site.

Procedures and Safe Practices

Site-control procedures and safe practices include the following:

- A map of the site.
- Clearly identified work zones.
- Procedures for a buddy system.
- Procedures for warning employees about emergencies.
- Standard operating procedures needed at the site.
- The name of the nearest emergency-medical responder.

This part of the Safety and Health Program requires a buddy system. What is a buddy system? Must both "buddies" work for the same employer?

❑ A buddy system pairs workers so they can help one another if an emergency occurs. Buddies do not have to work for the same employer, but they must be similarly equipped, appropriately trained, and must know their responsibilities.

Site Specific Safety and Health Plan

Purpose

This part of your written program identifies the hazards workers may encounter at the site and describes how you will protect them from those hazards. You need to explain the plan to employees before they begin work at the site.

Plan Elements

The site-specific Safety and Health Plan contains the following elements:

- A hazard analysis for each task identified in the comprehensive work plan.
- Training assignments for those who need training before they begin work.
- The personal protective equipment employees need.
- Who will need medical surveillance.
- The frequency and types of monitoring.
- Methods for eliminating or controlling hazards.
- Decontamination procedures.
- Emergency-response procedures.
- Confined-space entry procedures.
- Spill-containment procedures.

Can one site-specific Safety and Health plan cover all employees who work at the site even if they are not employed by the same contractor?

❑ One site-specific plan is acceptable if it covers all tasks, operations, and employers on the site, and if the employees are trained to use the plan. However, each contractor or subcontractor at the site must comply with OSHA requirements.

Education and Training

Purpose

Your employees need to know about the site hazards to which they may be exposed, how to recognize the hazards, and how to control their exposure. The best way for them to gain this knowledge is through education and training.

All employees who work at the site must have appropriate training before they begin their work.

Training Elements

Appropriate hazardous-waste-operations training addresses the following elements:

- The names of those responsible for the site-specific safety-and-health plan.
- Worksite hazards.
- How to use personal protective equipment.
- How to minimize exposure risks.
- How to use engineering controls and equipment.
- Medical-surveillance requirements.
- Decontamination procedures.
- Emergency-response procedures.
- Confined-space procedures.
- Spill-containment procedures.

Training Requirements

Employees at higher risk of exposure need more training than those who do lower-risk tasks.

The following table summarizes their initial and refresher training requirements:

Employee Category	Initial Training	Refresher Training
General on-site employees (work regularly in areas that may have health or safety hazards).	**Forty** hours off-site instruction and **three** days of field experience.	**Eight** hours annual refresher training.
Employees on site only occasionally to do a specific, limited task.	**Twenty-four** hours off-site instruction and **one** day of field experience.	
Employees who work regularly on site in areas with no health or safety hazards.		
Supervisors of general on site employees.	**Forty** hours off-site instruction and **three** days of field experience.	

Certification

Those who have successfully completed their training and field experience must receive a written certificate that says they have done so. They cannot begin hazardous-waste work without one.

Does an occasional visitor to a site, such as a contractor surveying for placement of monitoring wells, need any of the above training?

- ❑ Visitors who won't be exposed above permissible exposure limits or published exposure levels must have 24 hours of off-site training and one day of field experience.

What does equivalent training mean?

- ❑ Equivalent training means that an employee has previous experience or training that meets OSHA requirements. Employees with equivalent training who are new to a site must still receive appropriate site-specific training and have appropriate supervised field experience at the new site.

Medical Surveillance

Purpose

Medical surveillance consists of regular medical examinations and consultations for employees who may be overexposed to hazardous substances during their work. The purpose of examinations is to detect medical conditions that could harm employees as a result of their hazardous-waste-operations work.

Who Needs Surveillance?

The following table shows which employees must have medical examinations and when the examinations are required:

Employee Category	When an Examination is Required
Employees who may be exposed to hazardous substances at or above permissible exposure limits or published exposure levels for those substances 30 or more days a year.	■ Prior to assignment. ■ Annually; more frequently if recommended by a physician. ■ At termination of employment or reassignment. ■ Immediately after reporting symptoms indicating overexposure.
Employees who wear a respirator for 30 or more days a year.	
Members of HAZMAT teams.	
Employees who show symptoms of overexposure to hazardous substances.	■ As soon as possible after an employee reports symptoms. ■ When a physician determines that an examination is necessary.

About the Examination

Key points about the examination:

The examination must be performed under the supervision of a licensed physician.

- The physician must have information about the employee's duties, exposure levels, and personal protective equipment.
- The employee must receive a copy of the physician's written findings.
- You must keep a record of the examination, including the employee's name and the physician's written opinion regarding the employee's medical fitness to do hazardous waste work or to wear a respirator.

Hazard Control and PPE

Purpose

Describes your policy for eliminating and controlling hazards — using engineering controls, work-practice controls, or personal protective equipment — at sites where your employees are involved in hazardous-waste operations.

Hazard Controls

You can eliminate or control site hazards most effectively with engineering controls. Work-practice controls and personal protective equipment (PPE) are less effective. Your written Safety and Health Program should have a policy to eliminate and control hazards as follows:

- Use engineering controls and work-practice controls to keep employee exposure at or below permissible exposure limits.

- If engineering and work-practice controls aren't feasible, use a combination of engineering controls, work practices, and personal protective equipment to keep employee exposure at or below permissible exposure limits.
- Rotate employees to control their exposures only when there is no other way to keep the exposures at or below permissible exposure limits.

About PPE

If you have employees who use personal protective equipment during hazardous-waste operations, you must have a policy that ensures the following:

- Equipment is selected to protect employees against site-specific hazards.
- Employees maintain and store equipment properly.
- Employees understand the equipment's limitations.
- Equipment is decontaminated and disposed of properly.
- Employees are trained to use, wear, and inspect equipment.
- Equipment fits employees who use it.

Air and Personnel Monitoring

Purpose

Monitoring helps you determine when and how to protect employees who may be exposed to hazardous substances during hazardous waste operations.

When and How to Monitor

The table below summarizes when and how to monitor employees involved in hazardous waste operations:

When to Monitor	How to Monitor
At initial entry.	Monitor the air to identify any condition immediately dangerous to life and health (IDLH) or hazardous exposure levels.
When an employee suspects a hazardous condition or hazardous atmosphere.	
After the cleanup phase of a hazardous-waste operation begins.	Use personal sampling to monitor employees likely to have the highest exposures to hazardous substances.

Informing Employees and Contractors

Purpose

This part of your written program informs employees and contractors about the site hazards they may be exposed to before they begin hazardous-waste work.

Requirement

Your written program must ensure that employees, contractors, and subcontractors know about the nature of hazardous substances on the site and the levels to which they could be exposed.

Handling Hazardous Materials

Purpose

To minimize their risk of exposure, employees must handle hazardous materials appropriately. This part of your written program describes how employees will handle, transport, and dispose of hazardous materials.

Handling Drums and Containers

Employees must observe the following safe practices:

- Use only containers that meet federal and state regulations for the waste they contain.

- Inspect containers for leaks or other signs of weakness before moving them.
- Consider containers that aren't labeled to contain hazardous materials.
- Store containers so that it is not necessary to move them frequently.
- Be aware of the hazards of moving drums and containers.
- Always use explosion-resistant equipment to handle containers in flammable atmospheres.
- Never stand on containers or use them as work platforms.

Controlling Spills

Employees must know how to control container spills or leaks and must observe the following safe practices:

- Keep appropriate salvage containers and absorbents on hand.
- Do not move containers that show signs of weakness, bulging, or swelling.
- Do not handle containers that contain radioactive waste until the risks of exposure have been properly assessed.
- Have appropriate fire extinguishers available.

Opening Drums and Containers

Employees who open hazardous-waste containers improperly can endanger themselves and others. Your written program must ensure that employees observe the following safe practices:

- Those not involved in opening hazardous-waste containers must be at a safe distance or be protected by a suitable shield.
- Keep sensitive equipment controls behind an explosion-resistant barrier.
- Use caution when opening containers with pressurized contents; open them from a remote location or use appropriate shielding.

Shock-Sensitive Waste

Employees who handle shock-sensitive waste must observe the following safe practices:

- Keep nonessential persons away from the handling area.
- Use handling equipment that has explosion-resistant shields or barriers.
- Use an alarm to warn others before handling shock-sensitive materials.
- Maintain clear communication with everyone involved in handling the material.
- Permit only appropriately trained employees to open laboratory waste packs.
- Consider any container shock-sensitive if crystalline material has formed on its outside.

Do I have to label drums and containers to the extent required by the Hazard Communication Standard?

❑ No. However, you must identify or organize them by chemical hazard or class so that employees will know what precautions to take before handling them.

If I remove earth that is covering underground gasoline or oil tanks, and I install tank liners, do I need to follow OSHA requirements?

❑ If the tank is leaking, has leaked, or your work is part of a mandatory corrective action – yes.

I work on a Superfund site where drums have been dug up, repacked, numbered, and listed on a manifest. Do I need to put more specific labels on these drums?

❑ The label information must tell employees how to safely handle them. Numbering them and listing them on a manifest is OK as long as the information includes the chemical hazard class.

Decontamination

Purpose

Employees who may be exposed to hazardous substances must know how to decontaminate themselves and decontaminate or dispose of contaminated equipment.

Employee Requirements

Your written program must ensure that employees know how to decontaminate themselves before they enter a contaminated area and that they do the following:

- Avoid handling contaminated substances or equipment.
- Remove porous clothing wetted by a hazardous substance and shower immediately before leaving a contaminated area.
- Keep PPE in change rooms unless they are authorized to remove it.
- Follow decontamination procedures after leaving a contaminated area.

Other Safe Practices

Your written program must ensure the following safe practices:

- Keep decontamination areas away from uncontaminated workers and equipment.
- Inform commercial laundries about the harmful effects of hazardous substances on contaminated clothing they receive from your employees.

Emergency Response

Purpose

You cannot predict emergencies, but you can respond to them effectively if you plan for them. Your written program must include a plan that ensures employees know what to do when an emergency happens.

Plan Elements

Your emergency-response plan must address the following:

- Possible emergency situations at the site.
- Personnel roles, lines of authority, training, and communication procedures.
- Reporting to local, state, and federal agencies.
- Emergency-response equipment.
- Safe distances and places of refuge.
- Emergency zones, safe distances, and evacuation areas.
- Evacuation routes and procedures.
- Emergency decontamination procedures.
- Medical treatment and first-aid procedures.
- Emergency communication procedures.
- Emergency-response plan evaluation criteria.

Making the Plan Work

Do not just put your plan away and forget about it until an emergency occurs. Do the following to make it effective:

- Integrate the plan with the emergency-response plans of local, state, and federal agencies.
- Rehearse the plan's procedures regularly.
- Review the plan to keep it current.
- Install an alarm at the site that will notify employees of an emergency.

How does an OSHA compliance officer evaluate a hazardous-waste operation's emergency-response plan?

- ❑ The compliance officer ensures that the plan is in writing, verifies that it contains the above elements, and ensures that employees know about it and rehearse it regularly.

Illumination

Purpose

This part of your written program ensures that employees have enough light to do their work safely.

Illumination Intensities

The table below shows the minimum illumination intensities in foot-candles for typical areas at hazardous-waste operations:

Foot-candles (or lumens)	Work Area
5	*General areas.*
3	*Excavation and waste areas, access ways, active storage areas, loading platforms, refueling, and field maintenance areas.*
5	*Indoors.*
5	*Tunnels, shafts, and general underground work areas.*
10	*General shops.*
30	*First-aid stations, infirmaries, and offices.*

How much light is a foot-candle or lumen? A foot-candle is equal to one lumen incident per square foot. The simplest definition is this one: A foot-candle is the illumination produced by one candle at a distance of one foot.

Sanitation at Temporary Workplaces

Purpose

This part of your written program describes your policy for providing appropriate sanitary facilities for employees at temporary workplaces.

Drinking Water

Employees must have an adequate supply of drinking water. Non potable water outlets must clearly identify that the water is not to be used for drinking, washing, or cooking.

- Drinking water must be supplied from closed portable containers, equipped with taps.
- Drinking-water containers must be clearly labeled and not used for any other purpose.
- If you supply disposable cups, employees must take them from a sanitary container and dispose of them in a separate container.

Toilet Facilities

Toilet facilities must be available for employees at the workplace. Hazardous waste sites that do not have sanitary sewers must have chemical, recirculating, combustion, or flush toilets. Doors to toilets must have locks that can be controlled from the inside.

Shower Facilities

If employees do on-site hazardous-waste cleanup work for at least six months during which they may be exposed to hazardous substances, they must have shower facilities and change rooms.

- Showers must meet OSHA sanitation requirements.
- Change rooms must meet OSHA sanitation requirements.
- Showers and change rooms must be in areas with exposures below permissible exposure limits and published exposure levels.
- Employees must shower at the end of their work shifts or before they leave the site.

Evaluating New Technology

Purpose

"New technology" refers to new products and equipment introduced by manufacturers to protect workers during hazardous-waste cleanup operations. Your written program should have a policy that directs employees to evaluate the benefits of new-technology products when they replace existing products or purchase new ones.

Section II

For Employers Engaged in Operations at Treatment, Storage and Disposal Facilities

Contents

- ❑ The Written Safety-and-Health Program for Operations at TSD Facilities
  - Site Evaluation
  - Hazard Identification and Control
  - Hazard Communication
  - Medical Surveillance
  - Material Handling
  - Decontamination
  - Education and Training
  - Emergency response
  - New technologies

The Written Safety and Health Program for Operations at TSD Facilities

About the Program

You must develop and implement a written safety-and-health program that will protect your employees involved in hazardous-waste operations. If you already have a written workplace safety-and-health program, you don't need to write a new one just for your hazardous-waste operations, as long as your existing program ensures that you and your employees accomplish the following:

- ❑ Identify, evaluate, and control safety and health hazards at your facilities.
- ❑ Respond promptly and appropriately to hazardous-waste operation emergencies.

Program elements

The table below shows the elements that your written safety-and-health program should include and describes why they are important. Use it as a guide to help you develop a new program or evaluate an existing one.

Program Element	Purpose
Site Evaluation	If your employees begin work at a new site, a qualified person must first evaluate the site to identify hazards and to determine how to control the hazards.
Hazard Identification and Control	Describes the engineering controls, work practices, and personal protective equipment needed to protect workers.
Hazard Communication	Ensures that employees are informed about the hazardous chemicals to which they may be exposed.
Medical Surveillance	Describes the purpose of medical examinations, their frequency, what the examinations include, and required information for the physician and the employee.
Handling Hazardous Materials	Describes appropriate methods for handling and transporting hazardous materials.

Decontamination	Describes procedures for decontaminating employees exposed to hazardous substances.
Education and Training	Identifies who must be trained, training topics, frequency of training, and qualifications of trainers.
Emergency Response	Describes critical activities and specific plan elements for dealing with site-specific emergencies.
New Technologies	Describes your policy for evaluating and adopting improved products for protecting employees involved in hazardous-waste clean-up operations.

Site Evaluation

Purpose

If your employees begin work at a site other than your facility, a qualified person must do a preliminary site evaluation to accomplish the following:

- Identify the specific hazards to which employees may be exposed.
- Determine what safety and health controls will protect employees from the hazards.

Soon after employees begin working at the site, a qualified person should do a detailed site evaluation.

Site Evaluation Elements

A preliminary site evaluation should provide you with the following information:

Site hazards including the physical or chemical properties of hazardous substances and how employees could be exposed to them.

- The risks to employees associated with exposure to hazardous substances.
- Where hazardous substances could leak or disburse.
- Site location, size, topography, and access routes.
- Employees' tasks and the time it will take them to compete the tasks.
- What personal protective equipment employees will wear.
- Capabilities of emergency responders, including their availability and response times.

Informing Employees

You must inform employees about the chemical, physical, and toxicologic properties of hazardous substances to which they may be exposed before they begin work at the site.

Hazard Identification and Control

Purpose

This part of your written program describes your policy for identifying worksite hazards and for eliminating or controlling them — using engineering controls, work-practice controls, or personal protective equipment.

Identifying Hazards

There are many ways to identify hazards. For example, many small-business owners may only need to walk around their workplaces and look for them. However, because TSD facilities handle hazardous substances, you may need to do a comprehensive survey.

Controlling Hazards

You can eliminate or control worksite hazards most effectively with engineering controls. Work-practice controls and personal protective equipment (PPE) are less effective. Your written safety-and-health program should have a policy to eliminate or control hazards as follows:

- Use engineering controls and work-practice controls to keep employee exposure at or below permissible exposure limits.
- If engineering and work-practice controls aren't feasible, use a combination of engineering controls, work practices and personal protective equipment to keep employee exposure at or below permissible exposure limits.
- Rotate employees to control their exposures only when there is no other way to keep exposures at or below permissible exposure limits.

About PPE

If you have employees who use personal protective equipment during hazardous-waste operations, you must have a policy that ensures the following:

- Equipment is selected to protect employees against site-specific hazards.
- Employees maintain and store equipment properly.
- Employees understand the equipment's limitations.
- Equipment is decontaminated and disposed of properly.
- Employees are trained to use, wear, and inspect equipment.
- Equipment fits employees who use it.

Hazard Communication

Purpose

Your written program must have a policy that ensures employees know about worksite chemical hazards and how to protect themselves from those hazards. The policy does not apply to hazardous waste as defined by the Solid Waste Disposal Act and amended by the Resource Conservation and Recovery Act of 1976.

Requirements

Your hazard communication policy must meet the requirements of the Hazard Communication Standard, which includes the following:

- ***Hazard determination:*** Identify and list all hazardous substances at the site, including hazardous substances to which employees may be exposed during their non-routine tasks and hazardous substances in unlabeled pipes.
- ***Labeling:*** Label on-site containers of hazardous chemicals with the chemical's name and a warning about its hazards.
- ***MSDSs:*** A material safety data sheet must cover each hazardous chemical used on site.
- ***Employee training:*** Inform and train employees who work with hazardous chemicals prior to their assignments and whenever their assignments or work processes change.

Medical Surveillance

Purpose

Medical surveillance consists of regular medical examinations and consultations for employees who may be overexposed to hazardous substances during their work. The purpose of the examinations is to detect medical conditions that could harm employees as a result of their hazardous-waste-operations work.

Who needs surveillance?

The table below shows which employees must have medical examinations and when the examinations are required:

Employee Category	When the Examination is Required
Employees who may be exposed to hazardous substances at or above permissible exposure limits or published exposure levels for those substances 30 or more days a year.	■ Prior to assignment. ■ Annually; more frequently if recommended by a physician. ■ At termination of employment or reassignment. ■ Immediately after reporting symptoms indicating overexposure.
Employees who wear a respirator for 30 or more days a year.	
Members of HAZMAT teams.	
Employees who show symptoms of overexposure of hazardous substances.	■ As soon as possible after an employee reports symptoms. ■ When a physician determines an examination is necessary.

About the Medical Examination

Key points about the examination:

- The examination must be performed under the supervision of a licensed physician.
- The physician must have information about the worker's duties, exposure levels, and personal protective equipment.
- The employee must receive a copy of the physician's written findings.
- You must keep a record of the examination, including the employee's name and the physician's written opinion regarding the employee's medical fitness to do hazardous waste work or to wear a respirator.

Handling Hazardous Materials

Purpose

To minimize their risk of exposure, employees must handle hazardous materials appropriately. This part of your written program describes how employees will handle, transport, and dispose of hazardous materials.

Handling Drums and Containers

Employees must observe the following safe practices when they handle drums and containers:

- Use only containers that meet federal and state regulations for the waste they contain.
- Inspect containers for leaks or other signs of weakness before moving them.
- Assume unlabeled containers contain hazardous materials.
- Store containers so that it is not necessary to move them frequently.
- Be aware of the hazards of moving drums and containers.
- Always use explosion-resistant equipment to handle containers in flammable atmospheres.
- Never stand on containers or use them as work platforms.
- Keep appropriate salvage containers and absorbents on hand to control leaks.

Material-Handling Equipment

Material-handling equipment used to move containers must be selected and operated to minimize igniting vapors released from those that may be damaged or ruptured. Observe the following safe practices to control leaks and spills:

- Keep appropriate salvage containers and absorbents on hand.
- Do not move containers that show signs of weakness, bulging, or swelling.
- Do not handle containers that contain radioactive waste until the risks of exposure have been properly assessed.
- Have appropriate fire extinguishers available.

Shipping and Transporting Containers

Employees must observe the following safe practices when they ship and transport containers:

- Identify and classify containers before shipping them.
- Limit the number of container staging areas and make sure they are accessible.
- Put hazardous wastes in bulk containers only after determining it is safe to do so.

Decontamination

Purpose

Employees who may be exposed to hazardous substances must know how to decontaminate themselves and decontaminate or dispose of contaminated equipment.

Employee Requirements

Your written program must ensure that employees know how to decontaminate themselves before they enter a contaminated area, and that they do the following:

- Avoid handling contaminated substances or equipment.
- Remove porous clothing wetted by a hazardous substance and shower immediately before leaving a contaminated area.
- Keep PPE in change rooms unless they are authorized to remove it.
- Follow decontamination procedures after leaving a contaminated area.

Other Safe Practices

Your written program must ensure the following safe practices:

- Keep decontamination areas away from uncontaminated workers and equipment.
- Inform commercial laundries about the harmful effects of hazardous substances on contaminated clothing they receive from your employees.

Education and Training

Purpose

Your employees need to know about the site hazards to which they may be exposed, how to recognize the hazards, and how to control their exposure. The best way for them to gain this knowledge is through education and training.

All employees who work on the site must have appropriate education and training before they begin their work.

Training Elements

Appropriate education and training addresses the following elements:

- How to identify and control worksite hazards.
- How to use personal protective equipment.
- How to minimize exposure risks.
- How to use engineering controls and equipment.
- Medical surveillance requirements.
- Decontamination procedures.
- Emergency-response procedures.

Training Requirements

The table below summarizes initial and refresher training requirements for new employees, current employees, and trainers:

Employee Category	Initial Training	Refresher Training
New Employees	***Twenty-four*** hours.	***Eight*** hours annually.
Current Employees	None required if previous work experience and training is equivalent to the twenty-four hours for new employees.	***Eight*** hours annually
Trainers	Satisfactory completion of a training course for subjects they are expected to teach and competent instructional skills	None required.

What level of training is required for employees such as clerical staff who have offices near TSD operations?

- ❑ Employees not engaged in hazardous-waste operations or emergency responses do not need the initial or refresher training listed above.

Emergency Response

Purpose

You cannot predict emergencies, but you can respond to them effectively if you plan for them. Your written program must include a plan that ensures employees know what to do when an emergency happens.

Plan Requirements

The requirements for your emergency-response plan depend on whether employees will remain on the site during the emergency or if they will assist in responding to the emergency.

Required Plan Elements

If your employees will remain on site during an emergency or if they assist in responding to the emergency, your emergency-response plan must address the following elements:

- Planning and coordinating with off-site responders.
- Personnel roles, lines of authority, and communication procedures.
- Emergency situations and how to prevent them.
- Safe distances and places of refuge.
- Site control and security.
- Evacuation routes and procedures.
- Emergency decontamination procedures.
- Emergency medical treatment and first aid.
- Emergency communication procedures.
- Necessary emergency equipment, including PPE.
- Emergency-response plan evaluation criteria.

Training Requirements

Emergency-response training must be certified in writing and cover the following topics:

- Elements of the emergency-response plan.
- Procedures for handling emergencies.
- Personal protective equipment necessary for emergencies.
- How to recognize hazards that may endanger responder's employees.

Who to Train

You do not need to train every employee at the facility if you satisfy one of the following conditions:

- You have trained a smaller number of employees to control emergencies and all other employees know how to recognize emergencies, summon the trained responders, and evacuate the affected area.
- A trained off-site team will respond promptly to an emergency, and on-site employees know how to recognize emergencies and summon the responders.

Making the Plan Work

Do not just put the plan away and forget about it until an emergency occurs; do the following:

- Inform responders about the site's topography and layout.
- Integrate the plan with the emergency-response plans of local, state, and federal agencies.
- Rehearse the plan's procedures regularly.
- Review the plan regularly and keep it current.
- Evaluate the plan's effectiveness after an incident and correct deficiencies.
- Install an alarm at the site that will notify employees of an emergency.

Is emergency-response training necessary for chemical facility employees who manufacture, use, store, or handle hazardous materials?

- ❑ Only if their activities could cause an emergency. Incidental releases of hazardous substances that employees can control quickly are not emergencies. However, these employees should have training covering the emergency-action plan, hazard communication, and respiratory protection.

How would an OSHA compliance officer evaluate a TSD facility's emergency-response plan?

- ❑ The compliance officer would verify that the plan is in writing, determine that it contains the required elements, and ensure that it is effectively communicated to employees and that employees rehearse it regularly.

New Technologies

Purpose

"New technology" refers to new products and equipment introduced by manufacturers to protect workers during hazardous-waste cleanup operations. Your written program should have a policy that directs employees to evaluate new-technology products when they replace existing products or purchase new ones.

Section III

Employers Who Respond to Releases of Hazardous Substances at Any Site

Contents

- ❑ The Written Emergency-response Plan.
  - Elements of an Emergency-response Plan.
  - Incident-command System.
  - Training.
  - Medical Surveillance.
  - Chemical-protective Clothing.

The Written Emergency Response Plan

Purpose

Prompt, effective responses to emergency situations-uncontrolled releases of hazardous substances, for example-happen when they are based on carefully-crafted and well-rehearsed plans.

If you are an employer who takes action to control releases of hazardous substances, no matter where they occur, you must have a written emergency-response plan that applies the elements and practices described in this section.

If you are already using a local or state emergency-response plan, you do not need to create another one; however, it must address the elements and components below.

Plan Elements

Your emergency-response plan must address the following elements:

- Planning and coordinating with off-site responders.
- Personnel roles, lines of authority, and communication procedures.
- Emergency situations and how to prevent them.
- Safe distances and places of refuge.
- Site control and security.
- Evacuation routes and procedures.
- Emergency decontamination procedures.
- Emergency medical treatment and first aid.
- Emergency communication procedures.
- Necessary emergency equipment, including PPE.
- Plan-evaluation criteria.

Critical Components

In addition to the above elements, your plan must include safe-practice procedures that address the following:

Plan Component	Purpose
Incident Command System (ICS)	The system for controlling and managing operations during an emergency.
Training	Identifies who needs training, types of training needed, and training hours required.
Medical Surveillance	Describes medical surveillance requirements for those who may be exposed to hazardous substances.
Chemical-Protective Clothing	Describes requirements for using chemical-protective clothing.
Post-Emergency-Response Operations	Describes requirements for removing hazardous substances after an emergency.

How would an OSHA compliance officer evaluate my emergency-response plan?

- ❑ The compliance officer would verify that the plan is in writing and determine that it contains the required elements, and ensures that it is effectively communicated to employees and that they rehearse it regularly.

Do I have to plan for emergency responses to specific sites or incidents?

- ❑ If planning for emergencies at specific sites or for specific incidents will make your response more effective, then you should do so.

Incident Command System

Purpose

The Incident Command System is a set of procedures for controlling and managing operations during an emergency. One person — the individual in charge — coordinates all emergency-response activities through the incident command system.

Individual in Charge

The senior emergency-response official responding to an emergency becomes the individual in charge. This person coordinates all emergency responders' activities through the incident command system and has the following responsibilities:

- Identifying hazardous substances or conditions at the site.
- Designating a safety officer to assist in identifying and evaluating hazards at the site.
- Enforcing incident command system procedures and ensuring that responders wear appropriate personal protective equipment.
- Determining when responders can remove positive-pressure self-contained breathing apparatus.
- Keeping others away from the site except those who are actively performing emergency operations.
- Implementing appropriate decontamination procedures after emergency operations are finished.

Training

Purpose

Your emergency-response plan must ensure that those who will respond to an emergency are appropriately trained before they participate in an actual incident.

Training Requirements

The table below summarizes the minimum training required for emergency responders:

Responder Category	Responder Tasks	Minimum Training Required
Skilled Support Personnel	Skilled equipment operators needed to perform emergency-support work.	Initial briefing covering hazards, PPE, and duties at the scene.
Specialist Employees	Provide technical assistance on specific hazardous substances.	Annual refresher training, or demonstrate competency in their specialty.
LEVEL 1 First responder, awareness level	Likely to witness or discover a hazardous substance release and initiate the emergency-response process.	❑ Training to identify emergencies and initiate the response process. ❑ Additional ***LEVEL 1*** competency. ❑ Annual refresher training.
LEVEL 2 First responder, operations level	Responds to releases of hazardous substances; protects nearby persons, property, or the environment from the effects of the release.	❑ ***Eight*** hours of training that includes ***LEVEL1*** awareness training or the equivalent relevant experience. ❑ Additional ***LEVEL 2*** competencies. ❑ Annual refresher training.

LEVEL 3 HAZMAT Technician	Responds to releases of hazardous substances; attempts to stop the release.	❑ Twenty-four hours of ***LEVEL 2*** training. ❑ Additional ***LEVEL 3*** competencies. ❑ Annual refresher training.
LEVEL 4 HAZMAT Specialist	Supports the HAZMAT Technician	❑ Twenty-four hours of ***LEVEL 3*** training. ❑ Additional ***LEVEL 4*** competencies. ❑ Annual refresher training.
On-scene Incident Commander	Implements the incident command system and the emergency-response plan.	❑ Twenty-four hours of ***LEVEL 2*** training. ❑ Additional on-scene incident commander competencies. ❑ Annual refresher training.
Trainers	Instructs any of the above employees.	Satisfactory completion of courses in the subjects they will teach.

Medical Surveillance

Purpose

Medical surveillance consists of regular medical examinations for employees who may be exposed to hazardous substances during their work. The purpose of the examinations is to detect medical conditions that could harm employees as a result of their hazardous-waste-operations work.

Who needs surveillance?

The table below shows which employees must have medical examinations and when the examinations are required:

Employee Category	When an Examination is Required
HAZMAT Specialists.	❑ Prior to assignment ❑ Annually; more frequently if recommended by a physician. ❑ Termination of employment or reassignment. ❑ Immediately after reporting symptoms indicating overexposure.
Members of HAZMAT teams.	
Employees who show symptoms of overexposure to hazardous substances.	❑ As soon as possible after an employee reports symptoms. ❑ When a physician determines an examination is necessary.

About the Examination

Key points about the examination: It must be performed under the supervision of a licensed physician.The physician must know about the worker's duties, exposure levels, and personal protective equipment.

- The employee must receive a copy of the physician's written findings.
- The employer must keep a record of the examination, including the employee's name and the physician's written opinion regarding the employee's medical fitness to do hazardous-waste work or to wear a respirator.

Chemical-Protective Clothing

Purpose

This part of your emergency-response plan ensures that employees will be protected from the chemical, physical, or biological hazards to which they may be exposed during emergency-response operations.

Requirements

Chemical-protective clothing ranges from items such as gloves and face shields to totally encapsulating chemical-protective suits. If your employees use chemical-protective clothing, your emergency-response plan must ensure the following:

- The clothing is selected to protect employees against site-specific hazards.
- Employees maintain and store the equipment properly.
- Employees understand the equipment's limitations.
- The equipment is decontaminated or disposed of properly.
- Employees are trained to use, wear, and inspect the equipment.
- The equipment fits employees who use it.

Chemical Protective Suits

Employees who may be exposed to substances that could cause immediate death, serious illness, or injury must wear totally encapsulating chemical-protective suits. The suits must provide the following level-A protection:

- Positive pressure, full-facepiece self-contained breathing apparatus (SCBA) or positive-pressure supplied-air respirator with escape SCBA approved by the National Institute for Occupational Safety and Health (NIOSH).
- Inner and outer chemically resistant gloves.
- Chemically resistant boots with steel toe and shank.
- Disposable protective suit, gloves and boots (depending on suit construction, may be worn over totally encapsulating suit).

Post-Emergency Response Operations

Purpose

This part of your emergency-response plan ensures the protection of responders who may be involved in cleanup operations involving hazardous substances after an emergency.

Requirements

If your employees are involved in cleanup operations after responding to an emergency, you must have a written safety-and-health program that meets HAZWOPER requirements for employers engaged in hazardous waste cleanup operations.

When does an emergency-response incident become a post-emergency operation?

- ❑ As long as an emergency-response team controls a site and a hazard exists, there is an emergency. When the team declares the emergency-response activity finished, any remaining cleanup is a post-emergency operation.

If my employees are involved in cleanup operations after responding to an emergency, do I have to develop a plan that meets all of the requirements?

- ❑ Your plan need only address the requirements that apply to the cleanup work your employees do.

HAZARD COMMUNICATION PROGRAM

The training will include the use of the PDCA video program with the accompanying handbooks and an explanation of the hazardous materials in their work area as well as any physical and health hazards. This will include the use of personal protective devices (such as respirators and safety glasses) and work practice instructions (such as the proper use of ventilation fans) which will permit the employee to work safely with the hazardous materials. It will include an explanation of the required labels and tags of hazardous materials and how to interpret the warnings. it will include how to obtain further information on the materials and program. Any appropriate emergency instructions and response procedures will be included.

NON-STANDARD WORK TRAINING

Any maintenance or other infrequent work will be reviewed by **Nolberto Galicia** for potential exposure to hazardous materials or other safety problems. A procedure will be established before work begins detailing appropriate actions and safeguards to control exposure to any hazardous chemical. This procedure will be used whenever the work is done.

SPECIAL NOTIFICATION

Prior to starting work at a job site, **Nolberto Galicia & Job Site Supervisor_** will meet with the owner, company representative, the General Contractor, and other subcontractors, if any, to discuss the work to be completed, potential safety and material hazards, and appropriate work practices. This meeting will identify materials used in the work place by the owner or other subcontractors and any materials **NG Environmental Contractors LLC may use to** complete the work. **NG Environmental Contractors LLC** will provide access to the MSDS file by the owner or subcontractors for materials likely to be encountered. The building owner and other subcontractors will be asked to provide **NG Environmental Contractors LLC** with access to the MSDS's required. An agreement will be reached on how **NG Environmental Contractors LLC,** the owner and other subcontractors will pass this information on to their employees.

EPOXY PRODUCTS

Epoxies are polymerizing coatings which cure by a reaction of the components. Sometimes, solvents are used to thin the material for a smoother finish or easier application. The solvents used to thin the epoxies have the same hazards as in other solvent-based paints. The epoxies are two component systems which have limited pot life_ The two components are a resin and a catalyst. Although both components can have toxic effects, the catalyst is usually the more toxic of the two.

Catalysts are of three types: polyamine catalysts are the most concentrated form of epoxy catalyst and can be very irritating to the nose, throat, lungs, and skin. Amine adduct **catalysts have been partially reacted and are less** toxic and easier to measure. Polyamide catalysts are polyamines reacted with unsaturated fatty acids and are less toxic than polyamines.

A key problem with all epoxy systems is that of sensitization. This sensitization can occur as a result of breathing the vapors of the epoxy components, called respiratory sensitization or skin contact with the materials, called dermal sensitization. The underlying principle is that the materials react with the lungs or skin to form biologically active compounds that cause an immune system response. In the case of the lungs, this can result in brochospasm or other asthma-like symptoms.

The problem with sensitization is that if exposed to enough of the material over a period of time to establish the immune response, tiny traces of exposure will cause severe reactions in the future. For example: a painter may work on a job for a couple of weeks using epoxies. Although he is fairly careful, he gets a little on his hands from time to time and does not wash it off right away. Then, he does not use epokies for a while but uses a little bit on a job at home where he again gets just a little on his hands. Even though he washes it off right away, by the next day he has a rash over most of the hand that was affected. He has become sensitized to epoxies.

Sensitization is like the body's response to disease organisms. It can last a long time, sometimes the rest of one's life_ Very small exposures to the sensitizing materials can result in painful rashes in the affected individual_ If the lungs are sensitized, the asthma-like symptoms could be life threatening. The key to the whole situation is to avoid the sensitizing exposure. Manufacturers have reduced the sensitization potential of most materials significantly but caution, common sense, and the use of gloves and proper ventilation will reduce the chance of sensitization. If most of your company's work is with epoxies, be especially careful.

Other catalyzed materials have the same basic problem as epoxies. Bitumen-epoxy coatings, catalyzed phenolic coatings, and others which use catalysts or second parts with "amine" or "amide" as part of the catalyst name have the same basic chemical propertie

SOLVENT-BASED PRODUCTS

Solvent-based paint systems use petroleum distillates as a vehicle as well as other toxic and flammable solvents. All of these can present a hazard from inhalation during the drying or curing time especially in closed in or confined space situations. A confined space is any space such as a tank or well where entry is limited.

Mineral spirits: solvent-based paints can contain mineral spirits, naptha, or aliphatic petroleum distillates. These materials are all flammable mixtures of chemically similar components. They are controlled for boiling point range and other technical properties. From a safety point of view, they are all similar in their effects_ They are

flammable, so keep fire, heat sources, and ignition sources away. This includes space heaters, cigarettes, torches or other sources of ignition. In areas where paint has been applied and is drying a potentially explosive atmosphere may develop. Use good cross ventilation to reduce this hazard.

In closed spaces these materials may build up to a point where some health effects are noticed. Headaches or dizziness are early signs of over exposure to mixed distillates. If a painter starts to experience these symptoms he should leave the area and go to a place where fresh air is available. Workers should be instructed to report the problem to a foreman and use either ventilation to reduce the concentration or an organic vapor respirator to reduce exposure before continuing work.

Drinking these materials can lead to-very serious health effects_ If the materials are accidentally
swallowed, it is generally not recommended to induce vomiting. Refer to the Material Safety Data Sheet for emergency procedures and seek immediate medical attention.

Skin exposure can lead to defatting of the skin. This is usually easy to observe since the tiny cracks in the skin turn white. If this continues over a long enough period of time particularly if thinner or solvents are used. to clean the skin, rashes and sores may develop as the skin's ability to protect itself is removed_ Barrier creams could be used to protect the skin and also make cleanup easier.

Other solvents: other solvents used with solvent-based paints are xylene, toluene, ketones, including methyl ethyl, ketone, methyl isobutyl ketone, glycol ethers, including propylene glycol monomethyl ether, diethylene glycol monoethyl or monobutyl ether and their acetates, butyl alcohol, cyclohexanone, and other related compounds.

These materials should be listed on the MSDS_ Most of them have TLV's or PEL's of 100 parts per million (ppm) or less. The lower the number of the TLV or PEL the higher the toxicity of the material so mineral spirits with a PEL of 500 ppm is of less concern than ethylene glycol monomethyl ether, with a TLV of 5 ppm_ Usually the more toxic ingredients are in lower
concentrations in the mixture but because of their high toxicity appropriate ventilation or organic vapor respirators should be used to protect the painters from the vapors.

Most of the materials like the petroleum solvents will defat the skin. Some are absorbed through the skin and can have toxic effects due to this absorption. Workers should take care to keep these mixtures off the hands and skin by using gloves, barrier creams, and good hygiene practice. The key point is to wash your hand thoroughly with soap and water if these materials get on them.

Just as these materials are more toxic than mineral spirits if breathed into the lungs, drinking them poses the same or worse problems. If a mixture using one of these solvents is accidentally swallowed; seek prompt medical attention. Bring the MSDS or container with a readable label to the emergency room or clinic so that the medical personnel can initiate prompt and effective treatment.

LATEX OR WATER-BASED PRODUCTS

The vehicles of water-based paints are not toxic in most inhalation exposures. The hazardous materials included in most formulations include glycols, propylene glycol, ethylene glycol, and ammonia. These are usually present in fairly low percentages. Accidentally drinking these materials could lead. to serious health effects but exposure to skin or breathing the vapors should not lead to any serious health effects; For closed areas, an appropriate respirator capable of removing organic vapors and ammonia, if it is present, should be used. In confined entry situations or other place where an oxygen deficiency could exist, a supplied air respirator should be used along with a second worker to help if the worker in the confined space, tank, or vessel is overcome.

The water-based paints can include latex paints, acrylics, vinyl acrylics, and water enamels. Drying releases minimal hazardous materials. No special precautions are needed for skin protection. When using a spray application, a dust mask should be used to reduce particle exposure.

POLYURETHANE PRODUCTS

Polyurethane systems are two-part systems that contain chemicals from a family known as isocyanates. Although the isocyanates used in most systems are large, partly reacted materials that evaporate very little into the air, they are even more potent as sensitizers than the epoxy components. This is particularly true of their ability to cause lung sensitization_ Polyurethanes
should only be applied using appropriate clothing, ventilation, and air supplied respirators in most situations_ Since urethanes are widely used, sensitization to them can cause asthma-like reaction to the air when walking through a store where pre-finished is sold.

SAFETY PROGRAM

PURPOSE AND SCOPE:

Progressive companies, like **NG Environmental Contractors, LLC,** realize that an effective safety program is an asset to the organization and its personnel. Workers' compensation legislation, enacted in 1911, made all industries cognizant of the benefits of accident prevention.

Federal legislation adopted in.1970 through the Williams-Steiger Act, also affects accident and illness prevention. The Occupational Safety and Health Act (OSHA) has made it mandatory for the construction industry to comply with the Federal Standards for construction or face the consequences of citations and fines. OSHA and the state of New Hampshire require all contractors to prepare and maintain an effective program of Accident Prevention. Accident Prevention or Safety essentially is the responsibility of Management and the Field Supervisor. Just as the Field Supervisor is responsible for the production schedules and costs incurred on a project, he/she is also responsible for accident prevention. He/she along with management officials is responsible for enforcing the Company Safety Program. Losses due to accidents are as costly as losses due to poor judgment or project mistakes.

It is the mission of this company to afford its employees an opportunity to provide a living while working in a safe environment. This company will enforce all OSHA Regulations' that apply to the work being performed.

LOSS CONTROL PROGRAM:

The Loss Control Program *has* been created to allow employees to partake in the process of making a safe workplace for all workers. The committee established throughout the Loss Control Program will review all procedures involved in the Safety Program of this company as well as advise and administer improvements to the program. The committee will meet at least quarterly and will be represented by equal numbers of employee and management representatives. A chair person will be elected by the committee. The position of chairperson will be rotated between employee and employer representatives. The committee will develop and disseminate to all employees a committee policy statement which will include established goals and objectives of the committee. The committee will also review workplace accidents *and* injury date to help establish the committee's goals and objectives. The establishment of the committee shall be determined by the following guidelines:

1. Employers with 20 or fewer employees shall have a minimum of two members.

2. Committee members shall be representative of the major work activities of the employer.

COMMITTEE RESPONSIBILITIES:

1. Any employee who participates in committee activities in his/her role as a committee member including but not limited to attending meetings, training activities, and inspections shall be paid at his/her regular rate of pay for all time spent on such activities.

2. The members of this committee shall be trained in workplace hazard identification and accident/incident investigation adequate to carry out the committee's responsibilities.

3. The committee is required to ensure that the necessary safety and health training for employees is provided so as to ensure a safe working environment.

9. The committee is required to take attendance and record all aspects of meetings in a log.

ACCIDENT INVESTIGATION:

All occurrences shall be investigated thoroughly. The proper investigation of a "near miss" will substantially reduce the chance of a re-occurrence and the possibility of injury or an additional insurance claim. Do not limit investigations only to bodily injury (worker compensation) accidents. An accident is any unwanted, unplanned event that interrupts the normal flow of scheduled activity. If investigated properly, the cause can be determined, corrected, and a re-occurrence eliminated.

Accident investigation records should not be concerned with the blame for an accident. It is the elimination of causes and sub-causes of an accident that will lead to prevention of future occurrences.

Accident investigation reports shall be written for all accidents pertaining to:

a. Workers' Compensation
b. Property damage
c. Fire (on the job)
d. Bodily injury (third party)
e. Automobile accidents

Upon investigating an accident of a very serious nature, proceed to a complete accident analysis in the following manner:

a. Written report
b. Complete description of the incident
c. Proposed cause of the accident
d. Proposed recommendations for the prevention of re-occurrence
e. Results of any investigations by outside agencies
f. Statements from any available witnesses
g. Photographs as required

ACCIDENT INVESTIGATION AND RECORD KEEPING:

OSHA requires that employers maintain a log of occupational injuries and illnesses. Injury records properly kept will also act as a measurement of performance. By comparing current injury records to past records, the Company can see if it has improved with the installation of a Safety Program. This type of record keeping can also be used to determine problem areas or accident trends and it will pinpoint areas that warrant immediate or long-range attention. A review of all accidents and recommendations of improvements are required by the State of New Hampshire on an annual basis.

JOB SITE SAFETY CHECKLISTS:

The following will serve as a guide for the development of job site and equipment inspection checklists. The sample checklist includes many items to be inspected which are common to most job sites.

I. Job Site Safety Information
   a. Posting of Hazard Warning posters
   b. Schedule of on-site Safety Meetings
   c. Check all medical and first-aid services and equipment
   d. Make sure all emergency telephone numbers, Fire Department, Police, and Ambulance, are posted

2. Housekeeping and Sanitation
   a. General neatness of working areas
   b. Regular disposal of waste and trash
   c. Passageways and walkways clear
   d. Adequate lighting
   e. Oil or grease removed from work areas
   f. Protruding nails removed
   g. Waste containers provided and used
   h. Sanitary facilities adequate and clean
   i. Drinking water adequate
   j. Disposable drinking cups

3. Fire Prevention
   a. Fire instructions to all personnel
   b. Fire extinguishers identified and checked
   c. Phone numbers of fire departments available
   d. No smoking signs posted and enforced as applicable

4. Electrical Checklist
    a. Check all electrical cords for proper grounding and conditions
    b. Check all power tools to insure grounds and conditions
    c. Check all power sources for proper grounding

5. Hand Tools
    a. Proper tools being used for each job
    b. Inspection and maintenance
    c. Damaged tools repaired or replaced promptly

6. Power Tools
    a. Proper training in the use of power tools
    b. Tools and cords in good condition
    c. Proper grounding
    d. All safety guards are in place and in working condition

7. Ladders
    a. Ladders inspected and in good condition
    b. Proper length ladders in use
    c. Properly secured to prevent slipping
    d. Rails should extend 36" above top ladder rest areas
    e. Rungs or cleats not over 12" on center
    f. Step ladders fully extended when in use
    g. Metal ladders not used around electrical lines
    h. Proper maintenance and storage

3. Scaffolding
    a. Is erection properly supervised
    b. Will all structural members meet safety standards
    c. Are all connections secure
    d. Is scaffolding secured to structure
    e. Are work areas free of debris
    f. Are workers protected from falling objects
    g. Have fall protection devices been provided
    h. Are fall protection devices in good condition

9. Handling and Storage of Flammable Materials
    a. All containers are labeled properly
    b. All materials are in approved containers
    c. Fire hazards are checked
    d. Proper storage temperatures and protections
    e. Proper types and number of fire extinguishers available

10. Personal Protective Equipment
    a. Eye protection
    b. Face shields
    c. Respirators or dust masks
    d. Hard hats or other head protection
    e. Tyvec suits for lead paint protection

ALTERNATIVE WORK PROGRAM:

Should an accident occur causing a **worker** to be forced out of work, it is the policy of **NG Environmental Contractors, LLC.,** to provide the worker with light duty shop or related work once the worker has been medically cleared for return to work by his/her doctor.

4

LICENSES AND PERMITS

EMT

EMT/ENVIRONMENTAL MANAGEMENT TRAINING, CORPORATION

ROBERTO PERALTA

has attended and satisfactorily passed the course:

OSHA HAZWOPER REFRESHER (8 HRS)

Certificate Number: 0HRS1108094

Date of Course: 08/06/2011

Exam Date: 08/06/2011

Expiration Date: 08/06/2012

"We certify that the above training is in accordance with OSHA Regulation 29 CFR 1910.120."

Director of Training

65 MERRIMACK STREET, SUITE #12, LAWRENCE, MA 01843
TEL# 978-828-5328 / EMTCORP2004@AOL.COM

OSHA 001387638

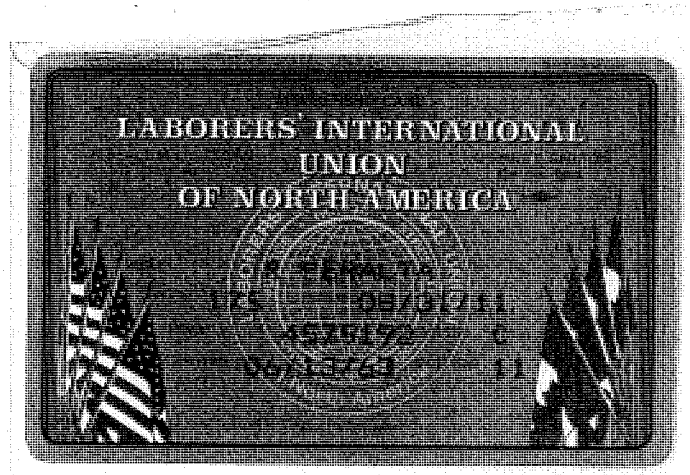
U.S. Department of Labor
Occupational Safety and Health Administration

ROBERTO PERALTA

has successfully completed a 10-hour Occupational Safety and Health Training Course in

Construction Safety & Health

MARIA ALCANTARA — 4/28/07
(Trainer) (Date)



Commonwealth of Massachusetts
Department of Labor Standards
Heather E. Rowe, Director
Asbestos Worker

ROBERTO A. PERALTA

Eff. Date 03/21/12
Exp. Date 03/20/13
AW034710
Member of C.O.N.E.S.
GLP

13

HV - RENEW

STATE OF NEW HAMPSHIRE
Department of Environmental Services
Asbestos Management & Control Program
ASBESTOS WORKER
Roberto Peralta

DOB: 06-13-1963
Eff. Date: 05/22/11
Exp. Date: 05/21/12
R

AW 008985

Robert Scott, Director
Air Resources Division

Rhode Island Department of Health
Asbestos Program
Worker

ROBERTO A PERALTA

Exp. Date: 03/31/2013
License #: LAW-6082
Member of C.O.N.E.S.

LAWRENCE TRAINING SCHOOL, INC.

This is to Certify

Roberto Peralta

Has successfully completed the 8 hour course

Asbestos Worker Refresher-Spanish

pursuant to the requirements for asbestos accreditation of the TSCA, Title II

AR0312-17-RP0330

Certificate Number

MAR 17, 2012

Date(s) of Training

MAR 17, 2012

Date of Examination

MAR 17, 2013

Expiration Date

Mario Alcántara

President/Director of Training

50 Pleasant Street Lawrence, MA 01841 | 978-689-7370 | www.lawrencetrainingschool.com

LAWRENCE WALK-IN MEDICAL CENTER
NEVILLE NAVARATNAM, M.D
100 Franklin Street
Lawrence, MA 01840
(978)682-8343

EMPLOYERS ASBESTOS CLEARANCE LETTER

NAME: Pralta Roberto S.S #: XXXX 0330

DATE OF EXAM: March 20th 2012 EXP. DATE: March 19th 2013

This letter confirms that the above named individual was examined in compliance with the OSHA asbestos standard (29 CFR 1926 - 1101). The required asbestos questionnaire, a medical and work history, and a complete physical examination were performed. Pulmonary function tests (PFT) were administered.

CHEST X-RAYS: RESULTS: Normal: ✓ Abnormal: ______
Next indicated in 20
PULMONARY FUNCTION TEST RESULTS: Normal: ✓ Abnormal: ______

COMMENTS:

______

The following conditions were identified which may place this employee at increased risk of health impairment from asbesto exposure:

______

The following limitations on personal protective equipment, including respirators are indicated:
(✓) None: The patient is medically qualified to wear all personal protection equipment.
(   ) Patient Limitations: ______

The employee has been informed of the results of the medical examination, both with regard to occupation and general medical conditions. The employee has been educated about increased risk of lung cancer. Smokers are advised regarding smoking cessation if indicated in accordance with the standard finding and diagnosis unrelated to asbestos exposure may not be communicated to the employer. Also in accordance with the Standard, a copy of this opinion is being forwarded to the employee.

Thank you for the opportunity to examine this individual.

Physician ______ Signature: R.L.N. navaratnam

R.L.N. [illegible], M.D.
Lawrence Walk-in Medical Center ______ center
100 Franklin Street
Address: Lawrence, Ma 01840
978-682-8343

Phone#: 978-682-8343

Spirometry Report
Puritan-Bennett Renaissance II
S/N: G040702007
Version: 1.2.0

Session Date: 20MAR2012
Session Time: 10:33AM
Last Cal Check: 01JAN2000

BEST FVC/FVL REPORT

ID:	XXXXX0330	Height:	69"	Physician:		Sensor Code:	335718
Name:	PERALTA ROBERTO	Age:	48YRS	Technician:		Temperature:	59F
Gender:	MALE	Weight:	220LBS			Barometric Press:	523mmHg
Medication:		Smoker:	NO			BTPS Correction:	1.166
Dosage:		Ethnicity/Correction:	HISPANIC		18.0%	Normals:	KNUDSON 83

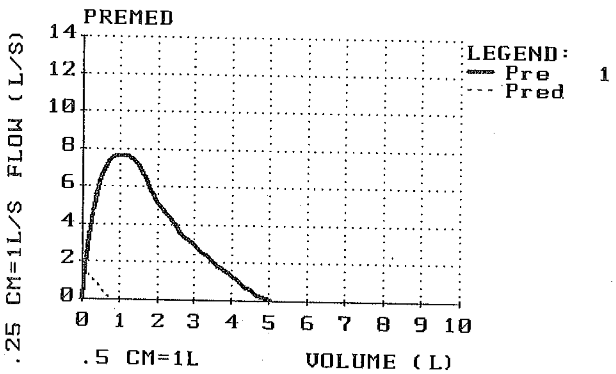
Clinical Format: PREMED - 10:33AM
Best Criteria: VAL

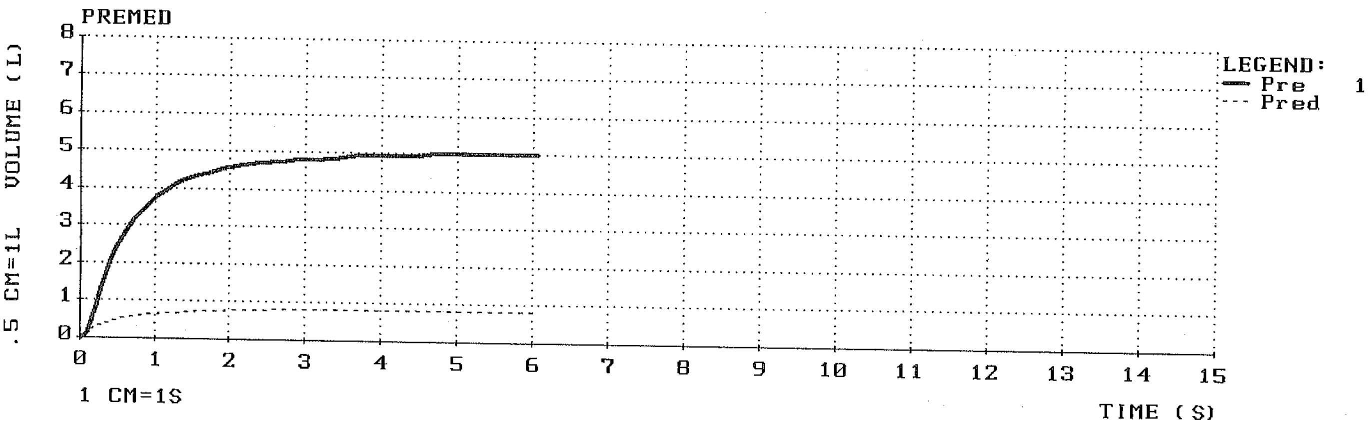
< Indicates Below LLN

MEASUREMENT	BEST	Trial	%Pred	Pred	LLN
FVC (L)	5.09	1	620	0.82	0.60
FEV1 (L)	3.93	1	586	0.67	0.52
FEV1%	77		89	87	76
FEF25-75 (L/S)	3.35	1	480	0.70	
PEF(L/S)	7.86	1	497	1.58	
FET (S)	4.98	1			

Report Summary:
Pre Med: Tests 1 Acceptable 0 Reproducible 0 FVC VAR: FEV1 VAR: PEF VAR:

ATS Interpretation: PREMED - Normal Spirometry
Comment:





R. L. N. [signature]

Lawrence ... Medical Center
100 Franklin Street
Lawrence, Ma

FIT TEST AND RESPIRATOR TRAINING CHECK LIST

PRUEBA DE AJUSTE DEL RESPIRADOR

The following is a checklist that must be completed for each employee to wear a negative pressure respirator. This form is required every year on all Asbestos or Lead job sites.

I CERTIFY THAT ON THE DATE STATED BELOW I WAS TESTED FOR THE RESPIRATOR TYPE AND MODEL LISTED BELOW. I WAS ALSO GIVEN TRAINING REGARDING THE PROPER USE OF THE RESPIRATOR AND THE MAINTENANCE PROCEDURES REQUIERED.

I FURTHER CERTIFY THAT I UNDERSTAND THE TRAINING PROVIDED TO ME AND KNOW THAT THE USE OF A RESPIRATOR UNDER CONDITIONS CONTRARY TO THOSE OUTLINED AS APPROPRIATE IN THE TRAINING AND TEST SESSION MAY NOT PROVIDE ADEQUATE PROTECTION.

Qualified Instructor Signature: Mario Alcantara

Employee/Subcontractor Signature: Roberoperalta

Roberto Peralta031712

Date: **March 17, 2012**

1. Challenge substance: (Circle One) (Irritant Smoke) Oil Saccharin
2. Fit Check Procedures:
   A. Negative Pressure Check (PASS) / FAIL B. Positive Pressure Check (PASS) / FAIL
3. Testing Procedure :

	Reaction
a. Normal breathing	None
b. Deep breathing	
c. Turn head from side to side	
d. Nod head up and down	
e. Talking and/or counting backwards from 100	
f. Jogging in place	
g. Bend over and touch toes	
h. Grimace and frown	
i. Repeat rainbow passage	
j. Breathe normally	

4. Overall Evaluation: (PASS) / FAIL

5. Respirator Approvals:

Approval: **AWR0312-17-RP0330**

Type **HALF-FACE**

Size M

5

MATERIAL PRODUCT DATA

MATERIAL SAFETY DATA SHEET

Sikagard 62 - Part B (ALL COLORS)

HMIS

HEALTH	3
FLAMMABILITY	1
REACTIVITY	0
PERSONAL PROTECTION	C

1. Product And Company Identification

Supplier
Sika Corporation
201 Polito Ave
Lyndhurst, NJ 07071

Company Contact: EHS Department
Telephone Number: 201-933-8800
FAX Number: 201-933-9379
Web Site: www.sikausa.com

Manufacturer
Sika Corporation
201 Polito Ave
Lyndhurst, NJ 07071

Company Contact: EHS Department
Telephone Number: 201-933-8800
FAX Number: 201-933-9379
Web Site: www.sikausa.com

Supplier Emergency Contacts & Phone Number
CHEMTREC: 800-424-9300
INTERNATIONAL: 703-527-3887

Manufacturer Emergency Contacts & Phone Number
CHEMTREC: 800-424-9300
INTERNATIONAL: 703-527-3887

DOT NON CORROSIVE AS PER 11/3/97 TESTING

Issue Date: 11/27/2007

Product Name: Sikagard 62 - Part B (ALL COLORS)
CAS Number: Not Established
Chemical Family: Amine
MSDS Number: 4221
Product Code: 0601792

2. Composition/Information On Ingredients

Ingredient Name	CAS Number		Percent Of Total Weight
AROMATIC HYDROCARBON BLEND	68477-31-6		
BENZYL ALCOHOL	100-51-6		
PROPRIETARY BLEND OF ALIPHATIC & CYCLIC AMINES	Not Establis		
SILICA, QUARTZ	14808-60-7		

*EXPOSURE TO SILICA, QUARTZ IS APPLICABLE ONLY IF CURED WITH PART "A" AND SANDED.

3. Hazards Identification

Eye Hazards

CONTACT MAY CAUSE SEVERE IRRITATION AND PAIN AND MAY CAUSE BURNS, NECROSIS AND PERMANENT INJURY. MAY CAUSE VISUAL DISTURBANCES, CORNEA DAMAGE, DAMAGE TO THE OPTIC NERVE OR BLINDNESS.

3. Hazards Identification - Continued

Skin Hazards

CONTACT MAY CAUSE SEVERE IRRITATION AND PAIN AND MAY CAUSE BURNS, NECROSIS AND PERMANENT INJURY. PROLONGED AND/OR REPEATED CONTACT WITH SKIN MAY CAUSE ANALLERGIC REACTION/SENSITIZATION.

Ingestion Hazards

ACUTELY TOXIC. HARMFUL IF ASPIRATED INTO LUNGS.

Inhalation Hazards

MAY CAUSE RESPIRATORY TRACT IRRITATION. OVEREXPOSURE MAY CAUSE CENTRAL NERVOUS SYSTEM EFFECTS.

4. First Aid Measures

Eye

RINSE EYES THOROUGHLY WITH WATER FOR AT LEAST 15 MINUTES. CONSULT PHYSICIAN.

Skin

WASH SKIN THOROUGHLY WITH SOAP AND WATER. REMOVE CONTAMINATED CLOTHING. IF SYMPTOMS PERSIST CONSULT PHYSICIAN.

Ingestion

DILUTE WITH WATER. DO NOT INDUCE VOMITING. CONTACT PHYSICIAN.

Inhalation

REMOVE TO FRESH AIR. IF BREATHING HAS STOPPED, INSTITUTE ARTIFICIAL RESPIRATION. CONSULT WITH PHYSICIAN.

5. Fire Fighting Measures

Flash Point: >220 °F
Autoignition Point: N/AV °F

Fire And Explosion Hazards

EXPOSURE TO HEAT BUILDS UP PRESSURE IN CLOSED CONTAINERS.

Extinguishing Media

In case of fire, use water spray (fog) foam, dry chemical, or CO2.

Fire Fighting Instructions

In the event of a fire, firefighters should wear full protective clothing and NIOSH-approved self-contained breathing apparatus with a full facepiece operated in the pressure demand or other positive pressure mode.

6. Accidental Release Measures

WEAR SUITABLE PROTECTIVE EQUIPMENT. VENTILATE AREA. CONTAIN SPILL AND COLLECT WITH ABSORBENT MATERIAL AND TRANSFER INTO SUITABLE CONTAINERS. AVOID CONTACT.

7. Handling And Storage

Handling And Storage Precautions

STORE IN A COOL, DRY, WELL VENTILATED AREA. KEEP CONTAINERS TIGHTLY CLOSED.

Work/Hygienic Practices

Wash thoroughly with soap and water after handling.

8. Exposure Controls/Personal Protection

Engineering Controls
Use with adequate general and local exhaust ventilation.

Eye/Face Protection
Safety glasses with side shields or goggles.

Skin Protection
AVOID SKIN CONTACT. WEAR LONG SLEEVE SHIRT AND LONG PANTS. CHEMICAL RESISTANT GLOVES.

Respiratory Protection
A respirator protection program that meets 29 CFR 1910.134 requirement must be followed whenever workplace conditions warrant a respirator's use. In areas where the Permissible Exposure Limits are exceeded, use a properly fitted NIOSH-approved respirator.

Other/General Protection
WASH THOROUGHLY AFTER HANDLING.

Ingredient(s) - Exposure Limits

AROMATIC HYDROCARBON BLEND
- ACGIH TLV: NOT ESTABLISHED
- OSHA PEL: NOT ESTABLISHED
- IARC: NO
- NTP: NO

PROPRIETARY BLEND OF ALIPHATIC & CYCLIC AMINES
- ACGIH TLV: NOT ESTABLISHED
- OSHA PEL: NOT ESTABLISHED
- IARC: NO
- NTP: NO

SILICA, QUARTZ
- ACGIH TLV-TWA 0.1 mg/m3 (Notice of Intended Change)
- ACGIH TLV-TWA 0.05 mg/m3 (Proposed)
- OSHA PEL-TWA 30/%SiO2+2 mg/m3
- OSHA PEL-TWA 10/%SiO2+2 mg/m3
- OSHA PEL-TWA 250/%SiO+5 mppcf

9. Physical And Chemical Properties

Appearance
VISCOUS LIQUID (VARIOUS COLORS)

Odor
AMINE ODOR

Chemical Type: Mixture
Physical State: Liquid
Melting Point: N/AV °F
Boiling Point: N/AV °F
Specific Gravity: 1.70
Vapor Pressure: N/AV
Vapor Density: >AIR
Solubility: N/AV
Evaporation Rate: SLOWER THAN ETHER
VOC Content (A+B): < 100 grams / liter

MATERIAL SAFETY DATA SHEET

Sikagard 62 - Part B (ALL COLORS)

10. Stability And Reactivity

Stability: STABLE
Hazardous Polymerization: WILL NOT OCCUR

Conditions To Avoid (Stability)
NONE KNOWN

Incompatible Materials
STRONG OXIDIZING AGENTS, ACID AND EPOXY RESINS UNDER UNCONTROLLED CONDITIONS

Hazardous Decomposition Products
CO, CO2, OXIDES OF NITROGEN

11. Toxicological Information

Miscellaneous Toxicological Information

Conditions Aggravated By Exposure
EYE DISEASE, SKIN DISORDERS AND ALLERGIES, CHRONIC RESPIRATORY CONDITIONS

Ingredient(s) - Carginogenicity
SILICA, QUARTZ
NTP - Listed On The National Toxicology Program
Listed In The IARC Monographs

12. Ecological Information

No Data Available...

13. Disposal Considerations

Dispose in accordance with applicable federal, state and local government regulations.

14. Transport Information

Proper Shipping Name
NOT REGULATED BY D.O.T.

15. Regulatory Information

U.S. Regulatory Information
All ingredients of this product are listed or are excluded from listing under the U.S. Toxic Substances Control Act (TSCA) Chemical Substance Inventory.

SARA Hazard Classes
Acute Health Hazard
Chronic Health Hazard

SARA Section 313 Notification
This product does not contain any ingredients regulated under Section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 or 40 CFR 372.

State Regulations
WARNING: This product contains a chemical known to the State of California to cause cancer, birth defects, or other reproductive harm.

15. Regulatory Information - Continued

Ingredient(s) - State Regulations

BENZYL ALCOHOL
- New Jersey - Workplace Hazard
- Pennsylvania - Workplace Hazard
- Massachusetts - Hazardous Substance

SILICA, QUARTZ
- New Jersey - Workplace Hazard
- Pennsylvania - Workplace Hazard
- California - Proposition 65
- Massachusetts - Hazardous Substance

16. Other Information

HMIS Rating
Health: 3
Fire: 1
Reactivity: 0
PPE: C

Revision/Preparer Information
MSDS Preparer: EHS Department
MSDS Preparer Phone Number: 201-933-8800
This MSDS Supercedes A Previous MSDS Dated: 02/20/2007

Disclaimer

The information contained in this Material Safety Data Sheet applies only to the actual Sika Corporation ("Sika") product identified and described herein. This information is not intended to address, nor does it address the use or application of the identified Sika product in combination with any other material, product or process. All of the information set forth herein is based on technical data regarding the identified product that Sika believes to be reliable as of the date hereof. Prior to each use of any Sika product, the user must always read and follow the warnings and instructions on the product's current Technical Data Sheet, product label and Material Safety Data Sheet for each Sika product, which are available at web site and/or telephone number listed in Section 1 of this MSDS.

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SIKA CORPORATION

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Common Name: DECON SOLUTION 1-1ST WASH FOR UNKNOWN CONTAMINANTS
Manufacturer: NPS
MSDS Revision Date: 2/25/2011

Grainger Item Number(s): 3CNY9, 8ZE77
Manufacturer Model Number(s):

MSDS Table of Contents

Click the desired link below to jump directly to that section in the MSDS.

MATERIAL SAFETY DATA SHEET

SPILFYTER(R*) PRODUCTS

DECON SOLUTION 1

REVISION DATE: 2/25/11

MSDS NO.: 1018

SECTION 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NUMBER: 680041

PRODUCT NAME: DECON SOLUTION 1-1ST WASH FOR UNKNOWN CONTAMINANTS

MANUFACTURER:
NPS CORPORATION
3303 SPIRIT WAY
GREEN BAY, WI 54304

EMERGENCY TELEPHONE NUMBERS:

CHEMTREC:
DOMESTIC: (800) 424-9300 24 HOURS
INTERNATIONAL: (202) 483-7616 24 HOURS

INFORMATION: (800) 558-5066 7:30 AM-4:30 PM CDT M-F

SECTION 2. COMPOSITION/INFORMATION ON INGREDIENTS

CAS REGISTRY #	COMPONENT
497-19-8	SODIUM CARBONATE, ANHYDROUS
6834-92-0	SODIUM METASILICATE
77-09-8	PHENOLPHTHALIEN
7732-18-5	WATER

(NOTE: SEE SECTION 8 OF THIS MSDS FOR EXPOSURE GUIDELINES)

SECTION 3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW:
ODORLESS, PINK LIQUID. THIS MATERIAL PRESENTS LITTLE OR NO HAZARD IF SPILLED AND EXHIBITS NO UNUSUAL FIRE HAZARD.

POTENTIAL HEALTH EFFECTS:

EYE: MAY CAUSE IRRITATION.

SKIN:
MAY CAUSE IRRITATION. REPEATED SKIN CONTACT MAY AGGRAVATE AN EXISTING DERMATITIS (SKIN CONDITION) AND/OR SENSITIVITY OF THE SKIN.

INHALATION: MAY CAUSE IRRITATION TO THE UPPER RESPIRATORY SYSTEM.

SIGNS AND SYMPTOMS:
EYES: REDNESS, TEARING
SKIN: REDNESS
INHALATION: COUGHING, SHORTNESS OF BREATH
INGESTION: NAUSEA, VOMITING, DIARRHEA

SECTION 4. FIRST AID MEASURES

EYES:
IMMEDIATELY FLUSH WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES.
IF IRRITATION PERSISTS, SEEK MEDICAL ATTENTION.

SKIN:
REMOVE CONTAMINATED CLOTHING. WASH AFFECTED AREA WITH PLENTY OF SOAP AND WATER FOR SEVERAL MINUTES. IF SKIN IRRITATION DEVELOPS OR PERSISTS, SEEK MEDICAL ATTENTION.

INHALATION:
REMOVE TO FRESH AIR. IF NOT BREATHING, GIVE ARTIFICIAL RESPIRATION.
IF BREATHING IS DIFFICULT, GIVE OXYGEN. SEEK MEDICAL ATTENTION.

INGESTION:
IF SWALLOWED, CALL A PHYSICIAN OR POISON CONTROL CENTER IMMEDIATELY.

SECTION 5. FIRE FIGHTING MEASURES

FLASH POINT: NA

FLAMMABLE LIMITS: NA

AUTO-IGNITION TEMPERATURE: NA

NOTE:
THIS MATERIAL IS NON-COMBUSTIBLE AS SUPPLIED AND DOES NOT SUPPORT COMBUSTION.

EXTINGUISHING MEDIA:
IF THE NEED EXISTS, WATER SPRAY, DRY CHEMICAL FOAM, OR CARBON DIOXIDE CAN BE USED.

SPECIAL FIRE FIGHTING PROCEDURES:
FOR LARGE FIRES OR FIRES IN CONFINED AREAS, FULL EMERGENCY EQUIPMENT WITH SELF-CONTAINED BREATHING APPARATUS AND FULL PROTECTIVE CLOTHING SHOULD BE USED.

SECTION 6. ACCIDENTAL RELEASE MEASURES

AVOID BREATHING VAPORS. AVOID CONTACT WITH SKIN AND EYES. CONTAIN THE SPILL AND COLLECT THE MATERIAL USING CHEMICALLY RESISTANT SORBENT PRODUCTS.
IF THIS PRODUCT IS MIXED WITH OTHER MATERIALS, SEE SECTION 13.

SECTION 7. HANDLING AND STORAGE

STORE IN AT TEMPERATURES >32 DEG. F IN A WELL-VENTILATED AREA.
KEEP CONTAINERS TIGHTLY CLOSED.

NOTE:
IF THIS PRODUCT IS STORED AT TEMPERATURES >150 DEG. F OR AT ELEVATIONS ABOVE 5000 FEET, GAS MAY FORM, INCREASING THE PRESSURE WITHIN THE CONTAINER, CAUSING THE CONTAINER TO BULGE. IF BULGING OCCURS, REMOVE THE CONTAINER FROM THE WORK AREA AND SLOWLY OPEN THE CONTAINER TO RELEASE THE GAS. BE SURE TO WEAR PROPER PERSONAL PROTECTIVE EQUIPMENT.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

EXPOSURE LIMITS:
THERE ARE NO EXPOSURE LIMITS ESTABLISHED FOR ANY COMPONENT OF THIS PRODUCT.

THE END-USER MUST DETERMINE THE SPECIFIC TYPES OF PERSONAL PROTECTIVE EQUIPMENT NEEDED ACCORDING TO 29 CFR 1910.132 - PERSONAL PROTECTIVE EQUIPMENT (PPE) FOR GENERAL INDUSTRY.

THE FOLLOWING ARE ONLY SUGGESTIONS:

EYES: SAFETY GLASSES, GOGGLES, OR FACE SHIELD

SKIN: SUITABLE CHEMICALLY RESISTANT GLOVES AND PROTECTIVE CLOTHING

INHALATION:
IF VAPORS OR MISTS ARE PRESENT, AIR PURIFYING RESPIRATOR WITH APPROPRIATE CHEMICAL CARTRIDGE OR CANISTER.

ADEQUATE VENTILATION SHOULD BE PROVIDED TO LIMIT THE THREAT OF INHALATION.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: PINK LIQUID

ODOR: ODORLESS

BOILING POINT: NOT TESTED

VAPOR PRESSURE (MMHg): NOT TESTED

VAPOR DENSITY: NOT TESTED

SOLUBILITY IN WATER: SOLUBLE

SPECIFIC GRAVITY (H2O=1): 1.11

FREEZING POINT: NOT TESTED

pH: 12.1

EVAPORATION RATE (BUTYL ACETATE=1): NOT TESTED

% VAPORIZABLE BY VOLUME (H2O=100): 100

SECTION 10. STABILITY AND REACTIVITY

STABLE: YES

CONDITIONS TO AVOID: NONE KNOWN

INCOMPATIBILITY (MATERIALS TO AVOID):
REACTS WITH STRONG ACIDS AND FLUORINE. THIS MATERIAL IS CORROSIVE TO ALUMINUM, GALVANIZED IRON, ZINC, AND MAY GENERATE HYDROGEN GAS.

HAZARDOUS DECOMPOSITION OR BYPRODUCTS:
THERMAL DECOMPOSITION PRODUCES CARBON MONOXIDE AND CARBON DIOXIDE.

HAZARDOUS POLYMERIZATION: WILL NOT OCCUR

SECTION 11. TOXICOLOGICAL INFORMATION

THIS PRODUCT IS NOT LISTED BY NTP OR IARC. SEE SECTION 15.

SECTION 12. ECOLOGICAL INFORMATION

NO DATA AVAILABLE. SEE SECTION 15.

SECTION 13. DISPOSAL CONSIDERATIONS

THIS PRODUCT IN ITSELF IS CONSIDERED TO BE NON-HAZARDOUS AS DEFINED BY RCRA (40 CFR 261). ONCE USED, THIS PRODUCT MAY TAKE ON THE CHARACTERISTICS OF THE CHEMICAL(S) IT WAS USED WITH AND SHOULD BE DISPOSED OF ACCORDINGLY. DISPOSAL OF THIS PRODUCT (USED OR UNUSED) MUST BE IN COMPLIANCE WITH ALL LOCAL, STATE, AND FEDERAL REGULATIONS.

SECTION 14. TRANSPORT INFORMATION

DOT:
PROPER SHIPPING NAME: CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S.
HAZARD CLASS: 8

PACKING GROUP: II
IDENTIFICATION NUMBER: 3266

SECTION 15. REGULATORY INFORMATION

TSCA INVENTORY STATUS: ALL COMPONENTS ARE LISTED ON THE TSCA LIST.

SARA TITLE III:

SECTION 302 EXTREME HAZARDOUS SUBSTANCE LIST: NOT LISTED

SECTION 311/312 HAZARD CLASSIFICATION:
IMMEDIATE (ACUTE): YES
DELAYED (CHRONIC): NO
FIRE: NO
SUDDEN RELEASE OF PRESSURE: NO
REACTIVE: NO

SECTION 313 TOXIC CHEMICALS: NOT LISTED

USEPA CERCLA - REPORTABLE QUANTITY (RQ): NOT LISTED

RCRA HAZARDOUS WASTE: LISTED D001

STATE/INT'L RIGHT-TO-KNOW REGULATIONS:

CANADA'S WHMIS:
SODIUM CARBONATE 1%
SODIUM METASILICATE 1%

SECTION 16. OTHER INFORMATION

ABBREVIATIONS:
CFR: CODE OF FEDERAL REGULATIONS
OSHA: OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION
MSDS: MATERIAL SAFETY DATA SHEET
PEL: PERMISSIBLE EXPOSURE LIMIT
NA: NOT APPLICABLE
ACGIH: AMERICAN CONFERENCE OF GOVERNMENTAL INDUSTRIAL HYGIENISTS
TLV: THRESHOLD LIMIT VALUE
NTP: NATIONAL TOXICOLOGY PROGRAM
IARC: INTERNATIONAL AGENCY FOR RESEARCH ON CANCER
RCRA: RESOURCE CONSERVATION AND RECOVERY ACT
TSCA: TOXIC SUBSTANCES CONTROL ACT
SARA: SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT
USEPA: UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
CERCLA: COMPREHENSIVE RESPONSE, COMPENSATION, AND LIABILITY ACT
DOT: DEPARTMENT OF TRANSPORTATION
WHMIS: WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM
N.O.S.: NOT OTHERWISE SPECIFIED
NFPA: NATIONAL FIRE PROTECTION ASSOCIATION
HMIS: HAZARDOUS MATERIAL INFORMATION SYSTEM

NFPA RATINGS:
HEALTH 3
FIRE 0
REACTIVITY 1
SPECIAL HAZARD NONE

HMIS RATINGS:
HEALTH 3
FLAMMABILITY 0
REACTIVITY 1
PERSONAL PROTECTION X

NOTE:
THIS MSDS HAS BEEN PREPARED ONLY FOR THE DECON SOLUTION 1 (680041) OF SPILFYTER(R*) PRODUCTS. THE MSDS'S OF THE CHEMICALS USED WITH THIS PRODUCT MUST BE REVIEWED COMPLETELY, AND PRECAUTIONS TAKEN AS DESCRIBED.

THE INFORMATION ACCUMULATED HEREIN HAS BEEN COMPILED FROM SOURCES BELIEVED TO BE RELIABLE AND IS ACCURATE TO THE BEST OF OUR KNOWLEDGE. HOWEVER, NPS CORPORATION CANNOT GIVE GUARANTEES REGARDING THE INFORMATION FROM SOURCES, AND EXPRESSLY DOES NOT MAKE ANY WARRANTIES, NOR ASSUMES ANY LIABILITY FOR ITS USES OF THIS PRODUCT.

DISCLAIMER:
YOU HAVE PURCHASED SPILFYTER(R*) PRODUCTS FROM NPS CORPORATION
YOU HAVE BEEN PROVIDED DATA, PRODUCT LABELS, MSDS'S, AND OTHER INFORMATION ABOUT SPILFYTER(R*) PRODUCTS.

SOME SPILFYTER(R*) PRODUCTS ARE HAZARDOUS. INFORMATION ABOUT SPILFYTER(R*) PRODUCTS THAT ARE HAZARDOUS IS FURNISHED WITHOUT GUARANTEE. NPS CORPORATION DOES NOT GUARANTEE THE ACCURACY OF THE INFORMATION ABOUT HAZARDOUS SPILFYTER(R*) PRODUCTS.

THOSE PRODUCTS ARE ONLY TO BE USED BY PEOPLE HAVING EXPERTISE IN USING THE HAZARDOUS PRODUCTS.

THE INFORMATION PROVIDED ABOUT THE HAZARDOUS PRODUCTS IS BELIEVED TO BE CORRECT. YOU MUST PERFORM YOUR INVESTIGATION AS TO THE SAFETY, TOXICITY, SUITABILITY, AND PROPER SHIPPING METHOD FOR ANY HAZARDOUS SPILFYTER(R*) PRODUCT.

NO GUARANTEE, EXPRESSED OR IMPLIED, IS MADE BY NPS CORPORATION ABOUT THE RESULTS OF USE OF ITS PRODUCTS. NO GUARANTEE IS MADE AS TO THE SAFETY AND TOXICITY OF ANY SPILFYTER(R*) PRODUCT.

NPS CORPORATION DOES NOT ASSUME ANY LIABILITY ARISING OUT OF USE OF SPILFYTER(R*) PRODUCTS. ADDITIONAL INFORMATION AND RESEARCH MAY BE NECESSARY BEFORE YOU USE THE SPILFYTER(R*) PRODUCTS. NPS CORPORATION IS NOT RESPONSIBLE FOR DAMAGES, DIRECT OR INDIRECT, RESULTING FROM THE USE OF SPILFYTER(R*) PRODUCTS OR FROM RELIANCE ON DATA IN THE MSDS OR PRODUCT LABEL.

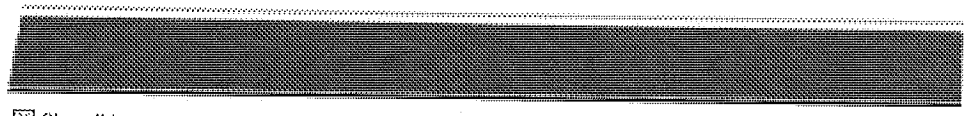
IF YOU RESELL SPILFYTER(R*) PRODUCTS, YOU MUST, BY LAW, FURNISH YOUR CUSTOMERS A COPY OF MSDS'S AND HANDLING INSTRUCTIONS.

YOU ARE ALSO REQUIRED BY LAW TO INSURE THAT ALL SPILFYTER(R*) PRODUCTS ARE PROPERLY SHIPPED.

SPILFYTER(R*), KOLLECT-A-KEM(R*), HANDS-IN-BAG(R*), KOLORSAFE(R*), AND GRAB&GO(R*) ARE ALL REGISTERED TRADEMARKS OF NPS CORPORATION

AQUALOCKIT(TM), TRUK-KIT(TM), DRAINGUARD(TM), GAPSEAL(TM), MEDICLEAN(TM), AND TIDYMAT(TM) ARE ALL TRADEMARKS OF NPS CORPORATION


DAWN



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MSDS

Common Name: ULTRA DAWN (ULTRA DAWN ORIGINAL BLUE (95405836), ULTRA DAWN HONEYSUCKLE & RAIN
Manufacturer: PROCTER & GAMBLE
MSDS Revision Date: 10/6/2008

Grainger Item Number(s): 1JYZ5
Manufacturer Model Number(s):

MSDS Table of Contents

Click the desired link below to jump directly to that section in the MSDS.

P&G

THE PROCTER & GAMBLE COMPANY
P&G HOUSEHOLD CARE
FABRIC & HOME CARE INNOVATION CENTER
5299 SPRING GROVE AVENUE
CINCINNATI, OH 45217-1087

MATERIAL SAFETY DATA SHEET

MSDS #: RQ0812427

SUPERSEDES: RQ0704530

ISSUE DATE: 10/6/08

ISSUE DATE: 2/10/08

SECTION I - PRODUCT IDENTIFICATION

Top

IDENTITY:
LIQUID HAND DISHWASHING DETERGENTS AND ANTIBACTERIAL HAND SOAPS
FINISHED PRODUCT

BRANDS: ULTRA DAWN

(ULTRA DAWN ORIGINAL BLUE (95405836), ULTRA DAWN HONEYSUCKLE & RAIN (95363123), ULTRA DAWN JASMINE & LAVENDER (95363124), ULTRA DAWN ADVANCED POWER (95506228), ULTRA DAWN ORANGE DISHWASHING LIQUID/ANTIBACTERIAL HAND SOAP (64031624), ULTRA DAWN APPLE BLOSSOM DISHWASHING LIQUID/ANTIBACTERIAL HAND SOAP (64031623), ULTAR DAWN PINK RIBBON (98678590), ULTRA DAWN PURE ESSENTIALS SPARKLING MIST (98822283), ULTRA DAWN PURE ESSENTIALS CITRUS INFUSION (98827118))

P&G TELEPHONE NUMBER: 1-800-725-3296

OR CALL LOCAL POISON CONTROL CENTER OR YOUR PHYSICIAN.

SECTION II - HAZARDS IDENTIFICATION

top

POTENTIAL HEALTH HAZARDS (ACUTE AND CHRONIC):
(SEE SECTION 11 FOR MORE INFORMATION)

INGESTION: INGESTION MAY CAUSE TRANSIENT GASTROINTESTINAL IRRITATION.

EYE CONTACT: MAY CAUSE MILD, TRANSIENT IRRITATION.

SKIN: TRANSIENT IRRITATION WITH PROLONGED EXPOSURE TO CONCENTRATED MATERIAL.

INHALATION: N/A

SIGNS AND SYMPTOMS OF EXPOSURE:

INGESTION: MAY RESULT IN NAUSEA, VOMITING, AND/OR DIARRHEA.

EYE CONTACT: MAY CAUSE STINGING, TEARING, ITCHING, SWELLING, AND/OR REDNESS.

SKIN:
PROLONGED CONTACT WITH CONCENTRATED MATERIAL MAY BE DRYING OR TRANSIENTLY IRRITATING TO SKIN.

INHALATION: N/A

POTENTIAL ENVIRONMENTAL EFFECTS: (SEE SECTION 12 FOR MORE INFORMATION)

SECTION III - COMPOSITION AND INGREDIENTS

top

INGREDIENTS LISTED ON THE PRODUCT LABEL ARE:
BIODEGRADABLE ANIONIC SURFACTANTS AND NO PHOSPHATE.
FOR ULTRA DAWN ADVANCED POWER, INGREDIENTS LISTED ON THE PRODUCT LABEL ARE: BIODEGRADABLE ANIONIC SURFACTANTS, ENZYMES, AND NO PHOSPHATE. FOR ANTIBACTERIAL HAND SOAPS, ACTIVE INGREDIENT IS TRICLOSAN AT 0.1%. INACTIVE INGREDIENTS FOR ANTIBACTERIAL HAND SOAPS ARE LISTED IN THE DRUG FACTS BOX ON BACK LABEL.

HAZARDOUS INGREDIENTS AS DEFINED BY OSHA, 29 CFR 1910.1200. AND/OR WHMIS UNDER THE HPA:

CHEMICAL NAME	COMMON NAME	CAS NO.	COMPOSITION RANGE	LD50/LC50
ETHYL ALCOHOL	ETHANOL	64-17-5	1-5%	LD50 (RABBIT, ORAL)= 6300 MG/KG

THESE SUBSTANCES ARE LISTED BECAUSE IN THEIR PURE BULK FORM THEY MEET THE OSHA DEFINITION OF HAZARDOUS. ANY HAZARDS ASSOCIATED WITH THIS FINISHED PRODUCT ARE LISTED IN SECTION II OF THIS MSDS.

SECTION IV - FIRST AID INFORMATION

top

FIRST AID PROCEDURES:

INGESTION: DRINK 1 OR 2 GLASSES OF WATER.

EYE CONTACT: FLUSH THOROUGHLY WITH WATER FOR 15 MINUTES.

SKIN:
IF PROLONGED CONTACT OCCURS, RINSE THOROUGHLY WITH WATER. IF SPILLED ON CLOTHING, CHANGE CLOTHES. IF SYMPTOMS PERSIST OR RECUR, SEEK MEDICAL ATTENTION.

INHALATION: N/A

OTHER:
CONSUMER PRODUCT PACKAGE HAS THE FOLLOWING PRECAUTIONARY STATEMENT ON THE BACK LABEL:
"FOR EXTERNAL USE ONLY. KEEP OUT OF THE REACH OF CHILDREN. IF DAWN GETS IN EYES, RINSE THOROUGHLY WITH WATER. IF SWALLOWED, DRINK A GLASS OF WATER TO DILUTE."

SECTION V - FIRE FIGHTING INFORMATION

FLAMMABLE PROPERTIES:
THE LIQUID HAND DISHWASHING DETERGENTS HAVE A FLASHPOINT OF 115-135 DEG. F (46.1-57.2 DEG. C) PENSKY-MARTENS (CLOSED CUP). HOWEVER, THE DETERGENTS DO NOT SUSTAIN COMBUSTION ACCORDING TO ASTM D4206.

FLAMMABLE PROPERTIES:
UPPER FLAMMABLE LIMIT: N/A
LOWER FLAMMABLE LIMIT: N/A

EXPLOSIVE LIMITS:
UEL: N/A
LEL: N/A

AUTO-IGNITION TEMPERATURE: N/A

HAZARDOUS COMBUSTION PRODUCTS: N/A

EXPLOSION DATA (SENSITIVITY TO MECHANICAL IMPACT): N/A

EXPLOSION DATA (SENSITIVITY TO STATIC DISCHARGE): N/A

EXTINGUISHING MEDIA:
SUITABLE: CO2, WATER OR DRY CHEMICAL MAY BE USED.
UNSUITABLE: N/K

PROTECTION OF FIREFIGHTERS:
SPECIFIC HAZARDS ARISING FROM THE MATERIAL: NONE.

SECTION VI - ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS: NONE

ENVIRONMENTAL PRECAUTIONS:
DISPOSAL IS TO BE PERFORMED IN COMPLIANCE WITH ALL FEDERAL, STATE AND LOCAL REGULATIONS. SOLUTIONS OF THE DETERGENTS MAY BE ALLOWED TO BE FLUSHED DOWN SEWER - FIRST CHECK WITH YOUR LOCAL WATER TREATMENT PLANT. RECYCLING IS RECOMMENDED FOR UNDILUTED SCRAP PRODUCT. DO NOT LANDFILL.

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:
PREVENT SPILLS FROM REACHING A WATERWAY. SORBENTS MAY BE USED. READ "WASTE DISPOSAL METHOD" BELOW FOR FURTHER INFORMATION.

SECTION VII - HANDLING AND STORAGE

PRECAUTIONS TO BE TAKEN IN HANDLING: NO SPECIAL PRECAUTIONS NECESSARY.

PRECAUTIONS TO B E TAKEN IN STORAGE: NO SPECIAL PRECAUTIONS NECESSARY.

SECTION VIII - EXPOSURE CONTROLS/PERSONAL PROTECTION

RECOMMENDED EXPOSURE GUIDELINES:
ETHANOL (CAS# 64-17-5)
ACGIH-TLV: 1000 PPM
OSHA Z-1 PEL: 1000 PPM

ENGINEERING CONTROLS: N/A

PERSONAL PROTECTIVE EQUIPMENT (PPE): N/A

EYE/FACE PROTECTION: NONE REQUIRED WITH NORMAL HOUSEHOLD USE.

INDUSTRIAL SETTING:
FOR SPLASH PROTECTION, USE CHEMICAL GOGGLES. EYE WASH FOUNTAIN IS RECOMMENDED.

SKIN PROTECTION: NONE REQUIRED WITH NORMAL HOUSEHOLD USE.

INDUSTRIAL SETTING:
PROTECTIVE GLOVES (RUBBER, NEOPRENE) SHOULD BE USED FOR PROLONGED DIRECT CONTACT.

RESPIRATORY PROTECTION: NO SPECIAL PRECAUTIONS FOR CASUAL EXPOSURE.

VENTILATION LOCAL EXHAUST: NONE REQUIRED WITH NORMAL CONSUMER USE.

INDUSTRIAL (GENERAL): NORMAL/GENERAL DILUTION VENTILATION IS ACCEPTABLE.

SPECIAL: NONE

OTHER: NONE

SECTION IX - PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE (COLOR, PHYSICAL FORM, SHAPE): CLEAR, OPAQUE OR COLORED LIQUIDS.

FLASH POINT (METHOD USED): 115-135 DEG. F (46.1-57.2 DEG. C)
PENSKY-MARTENS (CLOSED CUP) BUT DO NOT SUSTAIN COMBUSTION ACCORDING TO ASTM D4206.

ODOR: PERFUMED

RESERVE ALKALINITY: N/A

ODOR THRESHOLD: N/A

SOLUBILITY IN WATER: COMPLETE

PHYSICAL STATE: LIQUID HAND DISHWASHING SOLUTION

DECOMPOSITION TEMPERATURE: N/K

VAPOR PRESSURE (MM HG): N/K

EVAPORATION RATE (NBUOAC=1): N/K

VAPOR DENSITY (AIR=1): N/K

SPECIFIC GRAVITY/DENSITY: CA. 1

BOILING POINT: N/K

MELTING/FREEZING POINT: APPROX. 30 DEG. F (-1.1 DEG. C)

PARTITION COEFFICIENT (N-OCTANOL/WATER): N/K

pH (10% SOLUTION): 9

VOLATILE ORGANIC COMPOUND (VOC):
NOT APPLICABLE - PRODUCT NOT REGULATED FOR VOC CONTENT AT STATE OR FEDERAL LEVEL

SECTION X - STABILITY AND REACTIVITY

CHEMICAL STABILITY: STABLE

CONDITIONS TO AVOID: NONE KNOWN

INCOMPATIBLE MATERIALS: NONE

HAZARDOUS DECOMPOSITION PRODUCTS: NONE KNOWN

POSSIBILITY OF HAZARDOUS REACTIONS: NONE KNOWN

SECTION XI - TOXICOLOGICAL INFORMATION

LIQUID HAND DISHWASHING DETERGENTS HAVE A RELATIVELY LOW ORDER OF TOXICITY, MAY CAUSE TRANSIENT IRRITATION AND ARE EXPECTED TO BE EMETIC.

CHRONIC EFFECTS: NO CHRONIC HEALTH EFFECTS REPORTED.

TARGET ORGANS: NO TARGET ORGANS REPORTED.

CARCINOGENICITY: THIS FINISHED PRODUCT IS NOT CARCINOGENIC.
NTP: NO
IARC: NO
OSHA: NO

SECTION XII - ECOLOGICAL INFORMATION

ALL SURFACTANTS ARE READILY BIODEGRADABLE.

SECTION XIII - DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD:
DISPOSAL SHOULD BE IN ACCORDANCE WITH FEDERAL, STATE/PROVINCIAL AND LOCAL REGULATIONS

NON HOUSEHOLD SETTING:
PRODUCTS COVERED BY THIS MSDS, IN THEIR ORIGINAL FORM, WHEN DISPOSED AS WASTE, ARE CONSIDERED NON HAZARDOUS WASTE ACCORDING TO FEDERAL RCRA REGULATIONS (40 CFR 261). DISPOSAL SHOULD BE IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS. SOLUTIONS OF DILUTED DETERGENT IN THE COURSE OF USE, MAY BE ALLOWED TO BE FLUSHED DOWN SEWER. FIRST CHECK WITH YOUR LOCAL

WATER TREATMENT PLANT. RECYCLING IS RECOMMENDED FOR UNDILUTED SCRAP PRODUCT.

DO NOT LANDFILL.

CALIFORNIA HAZARDOUS WASTE:
NOT HAZARDOUS, IN ACCORDANCE WITH 22 CCR 66261.20 THROUGH 22 CCR 66261.24

HOUSEHOLD USE:
HOUSEHOLD PRODUCT IS SAFE FOR DISPOSAL DOWN THE DRAIN DURING DETERGENT USE OR IN THE TRASH. DISPOSE OF EMPTY BOTTLE IN THE TRASH OR RECYLE WHERE FACILITIES EXIST.

SECTION XIV - TRANSPORT INFORMATION

PRODUCTS COVERED BY THIS MSDS, IN THEIR ORIGINAL FORM, ARE NOT REGULATED FOR TRANSPORTATION.

GROUND TRANSPORT (US DOT): NOT REGULATED

AIR TRANSPORT (IATA): NOT REGULATED

MARINE/WATER TRANSPORT (IMDG): NOT REGULATED

SECTION XV - REGULATORY INFORMATION

UNITED STATES:
ALL INTENTIONALLY-ADDED COMPONENTS OF THIS PRODUCT ARE LISTED ON THE US TSCA INVENTORY.
THIS PRODUCT IS NOT SUBJECT TO WARNING LABELING UNDER CALIFORNIA PROPOSITION 65.

EPA REG. NO.: NOT APPLICABLE

THIS PRODUCT CONTAINS THE FOLLOWING SARA 313/302/304/311/312 CHEMICALS: NONE

THIS PRODUCT CONTAINS THE FOLLOWING CERCLA CHEMICALS:

CHEMICAL NAME	CAS NUMBER	MAX RANGE IN PRODUCT (%)
ETHANOL	64-17-5	5.0%

STATE RIGHT-TO-KNOW:
THE FOLLOWING INGREDIENTS PRESENT IN THE FINISHED PRODUCT ARE LISTED ON STATE RIGHT-TO-KNOW LISTS OR STATE WORKER EXPOSURE LISTS:

INGREDIENT	CAS #	MAX LEVEL	STATE				
			IL	MA	NJ	PA	RI
ETHANOL	64-17-5	5.0 %	X	X	X	X	X

PERFUMES CONTAINED WITHIN THE PRODUCTS COVERED BY THIS MSDS COMPLY WITH APPROPRIATE IFRA GUIDANCE

CANADA:
ALL INGREDIENTS ARE CEPA APPROVED FOR IMPORT TO CANADA BY PROCTER & GAMBLE.
THIS PRODUCT HAS BEEN CLASSIFIED IN ACCORDANCE WITH THE HAZARD CRITERIA OF THE CANADIAN CONTROLLED PRODUCTS REGULATIONS (CPR) AND THIS MSDS CONTAINS ALL INFORMATION REQUIRED BY THE CONTROLLED PRODUCTS REGULATIONS.

SECTION XVI - OTHER INFORMATION

PERFUMES CONTAINED WITHIN THE PRODUCTS COVERED BY THIS MSDS COMPLY WITH

APPROPRIATE IFRA GUIDANCE.

P&G HAZARD RATING:
HEALTH: 1
FLAMMABILITY: 1
REACTIVITY: 0

4=EXTREME
3=HIGH
2=MODERATE
1=SLIGHT
0=NOT SIGNIFICANT

*N/A. - NOT APPLICABLE
*N/K. - NOT KNOWN

DATA SUPPLIED IS FOR USE ONLY IN CONNECTION WITH OCCUPATIONAL SAFETY AND HEALTH.

DISCLAIMER:
THIS MSDS IS INTENDED TO PROVIDE A BRIEF SUMMARY OF OUR KNOWLEDGE AND GUIDANCE REGARDING THE USE OF THIS MATERIAL. THE INFORMATION CONTAINED HERE HAS BEEN COMPILED FROM SOURCES CONSIDERED BY PROCTER & GAMBLE TO BE DEPENDABLE AND IS ACCURATE TO THE BEST OF THE COMPANY'S KNOWLEDGE. IT IS NOT MEANT TO BE AN ALL-INCLUSIVE DOCUMENT ON WORLDWIDE HAZARD COMMUNICATION REGULATIONS.

THIS INFORMATION IS OFFERED IN GOOD FAITH. EACH USER OF THIS MATERIAL NEEDS TO EVALUATE THE CONDITIONS OF USE AND DESIGN THE APPROPRIATE PROTECTIVE MECHANISMS TO PREVENT EMPLOYEE EXPOSURES, PROPERTY DAMAGE OR RELEASE TO THE ENVIRONMENT. PROCTER & GAMBLE ASSUMED NO RESPONSIBILITY FOR INJURY TO THE RECIPIENT OR THIRD PERSONS, OR FOR ANY DAMAGE TO ANY PROPERTY RESULTING FROM MISUSE OF THE PRODUCT.

ULTRA DAWN HAND DISHWASHING LIQUID

Material Safety Data Sheet
n-Hexane

ACC# 00731

Section 1 - Chemical Product and Company Identification

MSDS Name: n-Hexane
Catalog Numbers: AC160780000, AC160780010, AC160780025, AC160780250, AC160780251, AC197360000, AC197360050, AC197360250, AC2683600, AC326660000, AC326660010, AC326660025, AC326710000, AC326710010, AC326710025, AC326780000, AC326780010, AC326780025, AC326920000, AC326920010, AC326921000, AC326922500, AC327890000, AC327890010, AC364370000, AC364370010, AC364371000, AC383800000, AC383800010, AC383800025, AC383800050, AC620040000, AC620048000, 16078-0040, 19736-0010, 19736-0025, H306-1, H306-4, H3064LC, H306SK-4
Synonyms: Hexane; Hexyl hydride; Hex.
Company Identification:

Fisher Scientific
1 Reagent Lane
Fair Lawn, NJ 07410

For information, call: 201-796-7100
Emergency Number: 201-796-7100
For CHEMTREC assistance, call: 800-424-9300
For International CHEMTREC assistance, call: 703-527-3887

Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name	Percent	EINECS/ELINCS
110-54-3	n-Hexane	93+	203-777-6

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Appearance: APHA: 20 max liquid. Flash Point: -22 deg C.
Danger! Flammable liquid and vapor. Danger of serious damage to health by prolonged exposure through inhalation. Breathing vapors may cause drowsiness and dizziness. Causes eye and skin irritation. Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. Possible risk of impaired fertility. Aspiration hazard if swallowed. Can enter lungs and cause damage.
Target Organs: Blood, central nervous system, liver, respiratory system, eyes, skin.

Potential Health Effects
Eye: Causes eye irritation.
Skin: Causes skin irritation. May be absorbed through the skin in harmful amounts. May cause dermatitis. There have been no reports of skin sensitization in people occupationally exposed to n-hexane. Skin sensitization was not observed in a maximization test using 25 volunteers.
Ingestion: Aspiration hazard. May cause irritation of the digestive tract. May be harmful if swallowed. May cause lung damage.

Inhalation: Harmful if inhaled. May cause respiratory tract irritation. Exposure produces central nervous system depression. Inhalation of vapors may cause drowsiness and dizziness. n-Hexane vapor concentrations can become so high that oxygen is displaced, especially in confined spaces.
Chronic: Chronic exposure may cause liver damage. Adverse reproductive effects have been reported in animals. Laboratory experiments have resulted in mutagenic effects. Chronic exposure may cause blood effects. Animal studies have reported the development of tumors.

Section 4 - First Aid Measures

Eyes: Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.
Skin: Get medical aid. Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.
Ingestion: Potential for aspiration if swallowed. Get medical aid immediately. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If vomiting occurs naturally, have victim lean forward.
Inhalation: Remove from exposure and move to fresh air immediately. If breathing is difficult, give oxygen. Get medical aid. Possible aspiration hazard. Do not use mouth-to-mouth resuscitation if victim ingested or inhaled the substance; induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.
Notes to Physician: Treat symptomatically and supportively.

Section 5 - Fire Fighting Measures

General Information: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Vapors may form an explosive mixture with air. Vapors can travel to a source of ignition and flash back. Will burn if involved in a fire. Containers may explode in the heat of a fire. Flammable liquid and vapor.
Extinguishing Media: Use water spray to cool fire-exposed containers. Use foam, dry chemical, or carbon dioxide.
Flash Point: -22 deg C (-7.60 deg F)
Autoignition Temperature: 223 deg C (433.40 deg F)
Explosion Limits, Lower:1.1 vol %
Upper: 7.5 vol %
NFPA Rating: (estimated) Health: 2; Flammability: 3; Instability: 0

Section 6 - Accidental Release Measures

General Information: Use proper personal protective equipment as indicated in Section 8.
Spills/Leaks: Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container. Wear a self contained breathing apparatus and appropriate personal protection. (See Exposure Controls, Personal Protection section). Remove all sources of ignition. Use a spark-proof tool. Do not let this chemical enter the environment.

Section 7 - Handling and Storage

Handling: Use spark-proof tools and explosion proof equipment. Do not get in eyes, on skin, or on clothing. Take precautionary measures against static discharges. Keep away from heat, sparks and flame. Do not ingest or inhale. Use only in a chemical fume hood.
Storage: Keep away from sources of ignition. Store in a cool, dry place. Store in a tightly closed container. Flammables-area.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls: Use explosion-proof ventilation equipment. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use only under a chemical fume hood.
Exposure Limits

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
n-Hexane	50 ppm TWA; Skin - potential significant contribution to overall exposure by the cutaneous r oute	50 ppm TWA; 180 mg/m3 TWA 1100 ppm IDLH (10% LEL)	500 ppm TWA; 1800 mg/m3 TWA

OSHA Vacated PELs: n-Hexane: 50 ppm TWA; 180 mg/m3 TWA
Personal Protective Equipment
Eyes: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.
Skin: Wear appropriate protective gloves to prevent skin exposure.
Clothing: Wear appropriate protective clothing to prevent skin exposure.
Respirators: A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant respirator use.

Section 9 - Physical and Chemical Properties

Physical State: Liquid
Appearance: clear, colorless - APHA: 20 max
Odor: faint odor - peculiar odor
pH: Not available.
Vapor Pressure: 160 mbar @ 20 deg C
Vapor Density: 2.97(Air = 1)
Evaporation Rate: Not available.
Viscosity: 0.31 mPa @ 20 deg C
Boiling Point: 69 deg C @ 760 mmHg
Freezing/Melting Point:-95 deg C
Decomposition Temperature: Not available.
Solubility: Insoluble.
Specific Gravity/Density:0.659
Molecular Formula:C6H14
Molecular Weight:86.18

Section 10 - Stability and Reactivity

Chemical Stability: Stable under normal temperatures and pressures.
Conditions to Avoid: Incompatible materials, light, ignition sources, excess heat.
Incompatibilities with Other Materials: Strong oxidizing agents, fluorine, liquid chlorine, dinitrogen tetraoxide, magnesium perchlorate.
Hazardous Decomposition Products: Carbon monoxide, carbon dioxide.
Hazardous Polymerization: Will not occur.

Section 11 - Toxicological Information

RTECS#:
CAS# 110-54-3: MN9275000
LD50/LC50:
CAS# 110-54-3:
Draize test, rabbit, eye: 10 mg Mild;
Inhalation, mouse: LC50 = 150000 mg/m3/2H;
Inhalation, rat: LC50 = 48000 ppm/4H;
Inhalation, rat: LC50 = 627000 mg/m3/3M;
Oral, rat: LD50 = 25 gm/kg;

Carcinogenicity:
CAS# 110-54-3: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

Epidemiology: Tumorigenic effects have been reported in experimental animals.
Teratogenicity: Teratogenic effects have occurred in experimental animals.
Reproductive Effects: Adverse reproductive effects have occurred in experimental animals.
Mutagenicity: Mutagenic effects have occurred in experimental animals.
Neurotoxicity: No information found
Other Studies:

Section 12 - Ecological Information

Ecotoxicity: No data available. Estimated BCF values = 2.24 and 2.89. These values suggest that hexane will show low bioconcentration in aquatic organisms. Estimated Koc value = 4.11. This product will show slight soil mobility and is expected to rapidly volatilize from moist surface soils.
Environmental: Terrestrial: Volatilization and adsorption are expected to be the most important fate processes. Aquatic: Photolysis or hydrolysis are not expected to be important. Atmospheric: Expected to exist entirely in the vapor phase in ambient air, expected half life 2.8 days. Expected to biodegrade but not bioconcentrate.
Physical: No information available.
Other: Do not empty into drains.

Section 13 - Disposal Considerations

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts

261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.
RCRA P-Series: None listed.
RCRA U-Series: None listed.

Section 14 - Transport Information

	US DOT	Canada TDG
Shipping Name:	HEXANES	HEXANES
Hazard Class:	3	3
UN Number:	UN1208	UN1208
Packing Group:	II	II
Additional Info:		FLASHPOINT -22 C

Section 15 - Regulatory Information

US FEDERAL

TSCA
CAS# 110-54-3 is listed on the TSCA inventory.
Health & Safety Reporting List
None of the chemicals are on the Health & Safety Reporting List.
Chemical Test Rules
None of the chemicals in this product are under a Chemical Test Rule.
Section 12b
None of the chemicals are listed under TSCA Section 12b.
TSCA Significant New Use Rule
None of the chemicals in this material have a SNUR under TSCA.
CERCLA Hazardous Substances and corresponding RQs
CAS# 110-54-3: 5000 lb final RQ; 2270 kg final RQ
SARA Section 302 Extremely Hazardous Substances
None of the chemicals in this product have a TPQ.
SARA Codes
CAS # 110-54-3: immediate, delayed, fire.
Section 313
This material contains n-Hexane (CAS# 110-54-3, 93+%),which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR Part 373.
Clean Air Act:
CAS# 110-54-3 is listed as a hazardous air pollutant (HAP).
This material does not contain any Class 1 Ozone depletors.
This material does not contain any Class 2 Ozone depletors.
Clean Water Act:
None of the chemicals in this product are listed as Hazardous Substances under the CWA.
None of the chemicals in this product are listed as Priority Pollutants under the CWA.
None of the chemicals in this product are listed as Toxic Pollutants under the CWA.
OSHA:
None of the chemicals in this product are considered highly hazardous by OSHA.
STATE
CAS# 110-54-3 can be found on the following state right to know lists: New Jersey, Pennsylvania, Minnesota, Massachusetts.

California Prop 65

California No Significant Risk Level: None of the chemicals in this product are listed.

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols:

XN F N

Risk Phrases:

R 11 Highly flammable.
R 38 Irritating to skin.
R 48/20 Harmful : danger of serious damage to health by prolonged exposure through inhalation.
R 62 Possible risk of impaired fertility.
R 51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R 65 Harmful: may cause lung damage if swallowed.
R 67 Vapours may cause drowsiness and dizziness.

Safety Phrases:

S 16 Keep away from sources of ignition - No smoking.
S 29 Do not empty into drains.
S 33 Take precautionary measures against static discharges.
S 36/37 Wear suitable protective clothing and gloves.
S 9 Keep container in a well-ventilated place.
S 61 Avoid release to the environment. Refer to special instructions /safety data sheets.
S 62 If swallowed, do not induce vomiting: seek medical advice immed iately and show this container or label.

WGK (Water Danger/Protection)

CAS# 110-54-3: 1

Canada - DSL/NDSL

CAS# 110-54-3 is listed on Canada's DSL List.

Canada - WHMIS

This product has a WHMIS classification of B2, D2B.
This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.

Canadian Ingredient Disclosure List

CAS# 110-54-3 is listed on the Canadian Ingredient Disclosure List.

Section 16 - Additional Information

MSDS Creation Date: 6/03/1999
Revision #11 Date: 7/28/2008

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall Fisher be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Fisher has been advised of the possibility of such damages.

6

WORK PLAN

NG Environmental Contractors, LLC
Asbestos • Lead Paint Removal • Select Demolition

ABATEMENT OF PCB- WORK PLAN

John E. Burke School Peabody Public School

A. SET UP OF MINIMAL CONTROLS:

1. Install temporary barriers or other controls to establish a "work zone" and to keep the public safe
2. The isolation of the regulated area will determined by a Competent Person (Site Supervisor)
3. Caution tape and warning signs will be posted at the regulated area
4. Two layers of 6mil polyethylene will be secured to building and cover the ground 10 feet from the window/door to be removed.
5. All windows and doors located on the same side of the regulated area within 50 feet will be closed
6. Vents, intakes and AC units located on the same side of the regulated area within 50 feet will be sealed with two layers of 6mil polyethylene sheathing and duct tape.
7. There will be a two layer 6mil polyethylene barrier constructed from the floor to the decking in the interior of building to isolate the work area from the rest of the building interior

B. DECONTAMINATION FACILITY

1. A remote two chamber decontamination unit will setup adjacent to the regulated area
2. The decontamination unit will be constructed using pre-assembled industry standard decontamination chambers
3. Wash water will collect in the showers basin and be pumped to a 55 gallon plastic drum, which will then be sealed, labeled, and processed properly

C. PERSONNEL and PPE:

1. Workers on site will have completed 40-hour HazWOPER training course
2. All workers will wear half face respirators, vinyl gloves, rubber boots and disposable coveralls while working in regulated areas
3. All workers will wash their faces and hands thoroughly with soap and water

D. WORK PROCEDURES:

1. Windows and doors will be removed by manual methods and hand tools to eliminate possibilities of creating dust
2. If power tool are needed to remove PCBs, then removal will be completed under a full containment
3. Any sealant or caulking left on surfaces to remain will be manually scraped to no visible debris are seen
4. Non-porous materials (metal/glass) may be decontaminated in accordance with 40 CFR 761.61(a)(5)(II)
5. Items that are contaminated and are porous will be will be placed in 6-mill disposal bags and sealed air tight with duct tape and placed in a second 6-mill bag and seal airtight as well and generator labels will be attached to the disposal bags prior to disposal in a 30 yard dumpster.
6. Items to large to be bagged, will be wrapped in two layers of 6mil polyethylene and sealed with duct tape
7. All waste will be removed from controlled area on a daily basis and disposed of in a 30 yard dumpster on site
8. All waste will be disposed of properly as Bulk PCB waste at an approved landfill
9. After removal of PCB waste is completed, work area will be visually inspected for any bulk debris

F. FINAL CLEAN-UP:

1. After all bulk PCB removal is complete the area will be completely and thoroughly vacuumed by an industry standard HEPA filtered vacuum
2. All surfaces where PCB Bulk Waste sealants were removed will be double wiped with hexane and a damp cloth if needed.
3. Site supervisor will perform an additional detailed visual inspection prior to notifying Hygienist.
4. After the final inspection the regulated area will be deregulated.

G. ENCAPSULATION PROCEDURES:

1. All foreign material will be removed from abated areas that could interfere with adhesion of new sealant, including dust, paints (except for permanent, protective coatings tested and approved)

2. If power washing is required

   a. Wash with a vacuumed attached pressure washer with a minimum 800 PSI at 1.5 gallons per minute and a maximum 4,000psi at 12 gallons a minute
   b. Washing will only take place after existing sealant has been removed and the authorization has been granted by the owner
   c. A water tight catch basin will be placed directly below the wash area as a secondary means of containment control of runoff and overspray. Storm drains will be covered using a flexible polyurethane cover to prevent wash water from entering catch basin
   d. Water usage and pressure will be minimized to prevent mist, vapors and over spraying, Workers will monitor the collection basin to ensure wash water does not puddle up or accumulate outside of the collection basin
   e. Wash water will be stored in closed tanks or other approved container labeled as containing PCB wash water until disposal is arranged

3. Apply Sika Sikagard 62 encapsulant to the painted CMU and interior poured concrete surfaces (if present) to one foot of either side of window surround caulk (interior and exterior).

   a. Apply first coat of red Sika Sikagard 62 encapsulant, a distance of one foot of either side of where caulking was removed from block or masonry surfaces.
   b. Apply second coat of grey Sika Sikagard 62 emcapsulant , a distance of one foot of either side of where caulking was removed from block or masonry surfaces.

H. WASTE LOAD-OUT/STAGING AREA:

1. The General Contractor will provide adequate staging area for all load out activities. The staging area will be fenced off from the general public. Only authorized personnel will be permitted to enter the staging area

2. All packaged and bagged PCB waste will be removed from the work area by hand and be loaded into a 30 yard dumpster lined with two layers of six-mill poly sheeting prior to loading of any waste

I. PERSONAL AIR MONITORING:

1. Personal air sampling will be taken by the abatement contractor's competent person Analysis of the personal samples will be performed by an accredited Analytical Laboratory.
2. Final visual inspections will be performed by the Environmental Consultant owner's representative

J. TRANSPORTER & LANDFILL

1. Services Transport Group
2. Final disposal: Minerva Landfill, 9000 Minerva Road, Waynesburg, OH.